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# THE
# PROGRESS OF REASON
# IN THE
# SEARCH OF TRUTH.

BRITISH MUSEUM
2 MAR 56

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# PREFACE.

BEFORE we attempt to ſearch into the origin of things, we ought to have the neceſſary degree of courage and ſtrength of mind, to be exempt from prejudice, and to have Reaſon only for our guide, and Truth for our object.

THE wiſe man will not tax him with raſhneſs who dares to maintain that, whilſt the effects ſhine forth to our eyes, their cauſes muſt ever remain in an impenetrable obſcurity: for who has aſſiſted at the formation of eſſences? Who has placed bounds to the human underſtanding? Who has meaſured it's capacity?—Has not the Supreme Intelligence, by which all exiſts, been able to make intelligences capable of knowing that which is? Muſt it not be ſuppoſed to have proportioned the activity of the human underſtanding to the immenſe variety of natural phenomena? And, if the various kinds of knowledge which the mind acquires, are only, in reſpect to it, new modes of being, why ſhould they not be as diverſified, as the forms which matter aſſumes by the aid of movement? Should not he who makes ſo many things worthy of being ſeen and known, have eyes ſufficiently piercing to ſee, and an underſtanding ſufficiently penetrating to comprehend?

If the eyes ſee, the ears hear, and the other faculties perform their functions without ſtanding in need of any precept, the underſtanding may in like manner reaſon, ſearch after truth, find it, and judge, without the aid of any ſcience.

LET us make uſe then of our eyes and of our underſtanding; let us ſee for ourſelves, think for ourſelves, and bluſh not to ſeek after truth.

# THE

# PROGRESS

# OF

# REASON, &c.

IN my infancy I have been educated in the prejudices of the day. Every man who does not reflect, remains all the reſt of his life ſubject to theſe prejudices. Theſe prejudices are the moſt fatal obſtacles to the knowledge of man. Prepoſſeſſed with paſſions of ſuch or ſuch a kind, whether devotion, debauchery, hatred, love, pride, jealouſy, or curioſity, he ſees ſcarce any thing in its natural ſtate; the object is always diſguiſed by the intermediate colour, through which it is perceived.

To remedy theſe inconveniencies, it is neceſſary to wait till the diſpoſition of the organs be changed, till it be reeſtabliſhed in a juſt equilibrium; and then the perception will be of a kind quite different, as well as the determination of the judgment.

In reflecting upon and ſtudying myſelf, I have had the happineſs to diſengage myſelf from all thoſe prejudices, and to overcome them; I have diſcovered that *that* which we call Nature, can neither be nor contain any other thing, ſave intelligence and matter. This Intelligence is the only object which we ought to acknowledge for the true God, and the ſole one upon which all Nature depends. It is this Supreme

Intelligence which gives movement and life to all matter; there is not an atom of this matter which is not dependant upon this infinite Intelligence, which is not governed and directed by it. All the individuals of Nature are the work of its omnipotence.

THAT which we call matter, is but the aſſemblage of all Beings. Theſe Beings, and this Intelligence, have never had a beginning; conſequently they are eternal. There is an inherent force in theſe Beings, which renders them eſſentially active and moving, capable of producing all the effects which we ſee. This inherent force cannot be produced but by this Intelligence, which preſides over all Nature; it is *that* which produces movement: it is by movement that every thing is formed, increaſed, altered, and deſtroyed.

It is movement which changes the aſpect of beings, which adds to them, and takes from them properties, and which cauſes that after having occupied a certain rank or order, each of them is forced by a conſequence of its nature, to relinquiſh it, to occupy another, and to contribute to the compoſition, to the birth, to the ſupport, of other beings, totally different in their kind, eſſence, and rank.

All the individuals of Nature are but compoſitions of atoms. Each atom has its ſoul particular and diſtinct from other atoms. Then each individual is compoſed of as many ſouls as atoms; conſequently, it can only be in the firſt atom of the compoſition of my individual, where my ſoul or my *Myſelf* can reſide; for all the other atoms are but added, and ſhall be ſeparated from it at my diſſolution.

ALL the beings or atoms which compoſe matter, are endowed with a portion of intelligence proportioned to the quantity of their ſpecies; they all poſſeſs this intelligence to a certain degree, the one more, the others leſs; ſo that each being has its portion of intelligence in the ſame degree.

THIS little atom or ſeed from whence iſſues the commencement of our actual exiſtence; this little machine, as compleat in its littleneſs as is the body itſelf, (inaſmuch as the body is but this ſame atom developed by the intuſuſception of a foreign matter) may it not ſurvive the diſſolution of all which it has received of the accidental kind ſince the conception?

MOREOVER, ſince this little body-primitive in which the individuality of our machine reſides, has ſubſiſted during infinite times, in undergoing ſo many revolutions, in paſſing ſucceſſively through the bodies of our forefathers, is not *that* a great prejudice in favour of its immortality? Stripped of all the foreign matter which it has received in the womb of the mother by the communication of her blood, and ſince its birth by nouriſhment, may it not reſiſt the attacks of death? may it not live eternally, as it has ſubſiſted heretofore independently of all theſe reſources? Why even ſhould we judge that this primitive machine, being diſengaged from all which it had of a foreign nature, ſhould not think, and have ſenſations? Ought we to believe that without a certain volume of matter, we can neither think, nor have ſenſations? The ſprings of this little machine would, it is true, be extremely delicate and fine; but what would not be their ſtrength, if they were unalterable? And what is neceſſary to give them this ſtrength? A ſimple will of the Supreme Intelligence.

You will ſay to me, perhaps, that you do not remember to have thought, nor to have had ſenſations whilſt you were ſhut up in the bodies of your anceſtors; but are you ignorant that the memory depends upon certain impreſſions of the brain, that theſe impreſſions are made by the aid of animal ſpirits, and that not having then the ſame organs, nor the ſame animal ſpirits, nor the ſame fibres that you have now, you ought not to be ſurprized that you do not remember, either the thoughts, or the ſenſations which you had a hundred years ago in the body of your great-grandfather; you thought then through the medium of ſenſations quite different, in like manner as you will think in all the ages to come, through the medium of ſenſations, which will no longer be the ſame as thoſe which you have to-day.

THAT which is called the Univerſe, comprehends the infinite ſpace in which all beings are placed. The Sun, the Moon, the Stars, all the Globes, and all the Planets, are all animals compoſed of atoms, which live and nouriſh themſelves at the expence, and by the ſubſtance the one of the other, in this infinite ſpace; theſe animals contain others, and ſo on, from degree to degree, ad infinitum.

EXPERIENCE demonſtrates to us this ſerious truth beyond all doubt: we are animals who live and nouriſh ourſelves by the ſubſtance of that animal which we call the Earth, and upon which we are placed: in our turn, we are full of animals ſmaller than us beyond all compariſon; as are the worms and all ſorts of vermin which inhabit within and upon the ſuperficie of our bodies: thoſe are again the earth to other animals more imperceptible. Our fleſh, our blood, our ſpirits, and all our ſubſtance, are nothing more than a tiſſue of little animals, who live and nouriſh themſelves at the expence and upon the ſubſtance the one of the others, lend to us the movement which they have, ſuffer themſelves to be conducted at our will, and conduct us ourſelves; which produce at laſt all together that action which we call life.

SINCE *that* which we call matter, is compoſed only of ſperm, or little animals,

mals, through how many revolutions muſt not this ſperm, or little human animal, have paſſed, before it becomes ſeed, and meets with a matrix ſuitable to produce it, and to make of it a man? How many millions of times has not this ſperm, marching on with a deſign to produce this man, ſerved to the production of all ſorts of individuals, as well in the animal as in the vegetable world, by reaſon of the more or leſs of theſe atoms which it wanted to arrive at its term? It is in this reſpect the ſame with every thing which produces itſelf; and nothing makes or produces itſelf, but that its firſt commencement is ſperm. How many millions of years muſt not a prodigious quantity of ſperms ſtill wait, before they are able to produce themſelves under their natural forms, and that for want of having met with matter proper for their development? For the quantity of ſperms is inexhauſtible.* Every thing which is, feels and vegetates; and after that each ſperm has arrived at its term, or at its higheſt period, it re-deſcends and returns into its firſt ſtate, in order to come again *de novo*, and act over the ſame part.

### *All comes from the Supreme Intelligence.*

WE cannot give ourſelves ideas. Let us acknowledge that objects cannot of themſelves give us them. For how ſhould it be that a piece of matter ſhould have in itſelf the virtue of producing in me a thought? Then the eternal Intelligence which produces every thing, produces alſo the ideas, be the manner of doing this what it may.

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* On a narrow examination into the male ſperm of all animals, it is found to conſiſt of ſuch a prodigious number of animalcules, ſwimming about in it every way like ſo many little tadpoles, as is an amazing ſight: nor is it leſs curious to obſerve their languid motion in ſuch as are tainted with the venereal diſeaſe, and how they recover their former briſkneſs as the diſorder abates. Theſe animalcules are ſo extremely ſmall, that it is computed that 3,000,000,000 of them are not equal to one grain of ſand, whoſe diameter is but the $\frac{1}{000}$ part of an inch.

But what is an idea? what is a ſenſation, a will, &c.? It is *me* perceiving, *me* feeling, *me* willing.

We know, in ſhort, that there is no more a real being called idea, than a real being called movement; but there are bodies moved. In like manner, there is no particular being called memory, imagination, judgment; but we remember, we imagine, we judge. All this is inconteſtably true.

Now, how is it that the intelligent and omnipotent Being produces all theſe modes in organiſed beings? Has he put two beings in a grain of wheat, of which the one ſhall make the other ſpring? Has he placed two beings in a ſtag, of which the one ſhall make the other run? No, without doubt; but the grain is endowed with the faculty of vegetating, and the ſtag of running.

What is vegetation? It is movement in matter. What is this faculty of running? It is the arrangement of the muſcles, which, attached to the bones, conduct forward other bones attached to other muſcles.

It is evidently a general mathématique which directs all Nature, and operates all productions. The flight of birds, the ſwimming of fiſhes, the running of quadrupeds, are demonſtrated effects of the rules of continued movement.

The formation, the nutrition, the increaſe, the decay of animals, are in like manner the demonſtrated effects of mathematical laws more uſeful.

## *Of the Mechaniſm of the Senſes.*

YOU explain by theſe laws how an animal moves itſelf to go in queſt of its food; you ought then to conjecture that there is another law by which it has the idea of its food, without which it would not go in queſt of it.

The Supreme Intelligence has cauſed all the actions of animals to depend upon their mechanical conſtruction; then this Intelligence has made to depend upon the mechanical conſtruction the ſenſations which cauſe actions.

In the formation of the organ of hearing there is a very manifeſt ingenuity. It is a helix of anfractuous windings, which directs the undulations of the air towards a ſhell in the form of a funnel; the air compreſſed in this funnel enters into the os petroſum, into the labyrinth, into the veſtibule, into the little conch, called the cochlea, or colimaçon; it proceeds to ſtrike the drum ſlightly ſupported upon the hammer, the anvil, and the ſtirrup, which play lightly in contracting or relaxing the ſtrings of the drum.

This addreſs in ſo many organs, and alſo in many others, carries the ſound into the brain; it there introduces the accords of muſick, without confounding them; it there introduces words, which are the couriers of the thoughts, of which there ſometimes remains a remembrance which laſts through life.

An ingenuity, not leſs wonderful, darts into our eyes, without wounding them, the rays of light reflected from objects, rays ſo very delicate and fine, that there ſeems to be nothing between them and non-entity; rays ſo rapid, that the twinkling of an eye bears no compariſon to their ſwiftneſs. They paint in the net of the eye the pictures of which they bring the colours. They trace the diſtinct image of a quarter of the heavens.

Thus we have inſtruments which evidently produce effects determinate, and very different, in acting upon the principles of the nerves; inſomuch, that it is impoſſible to hear by the organ of ſight, and to ſee by *that* of hearing.

SHALL we ſuppoſe then, that the Author of Nature has diſpoſed with an art ſo divine, theſe wonderful inſtruments; that he has placed relations ſo aſtoniſhing between the eyes and light, between the air and the ears, and ſtill that he ſhould ſtand in need of another aſſiſtant to perfect his work? Nature acts always by the ſhorteſt ways. The length of the proceeding is an impotence, the multiplicity of aids is a weakneſs.

THUS behold all prepared for ſight and hearing; all is in like manner prepared for the other ſenſes, with an art equally wonderful and induſtrious: and ſhall we deem the Supreme Being ſo bad an artiſan, that the animal formed by Him to ſee and hear, ſhall notwithſtanding neither hear nor ſee, if there be not placed in *it* a third internal perſonage, which alone ſhall perform theſe functions? Could not the Supreme Intelligence give us all at once ſenſations, after having given us the admirable inſtruments of ſenſation?

It has ſo done, we admit, in all the animals: no one is weak enough to imagine that there is in a rabbit, in a greyhound, a concealed being which ſees, which hears, which ſmells, which acts for them.

The innumerable multitude of animals enjoy their ſenſes by univerſal laws; theſe laws are common to them and us. I meet a bear in a foreſt: he has heard my voice, in like manner as I have heard his howling; he has ſeen me with his eyes, in like manner as I have ſeen him with mine. He has the inſtinct to eat me, as I have the inſtinct to defend myſelf, or to fly. Shall any one ſay to me, Stop; he has only occaſion for his organs for all that: but as for you, the caſe is different; it is not your eyes which have ſeen him; it is not your ears which have heard him; it is not the play of your organs which diſpoſes you to avoid him, or to fight him; it is neceſſary for you to conſult a little perſonage which is in your brain, without which you can neither ſee nor hear this bear, nor avoid him, nor defend yourſelf.

## *Of the Mechaniſm of our Ideas.*

CERTAIN it is, if the organs given by the Univerſal Intelligence to animals, ſuffice them, there is no reaſon to believe that ours do not ſuffice us; but that beſides the Univerſal Intelligence, we muſt alſo have a third agent in order to act.

IF there are caſes where this third might be uſeful, is it not abſurd at the bottom to admit *it* in other caſes? It is confeſſed that we make an infinity of movements without the aid of this third perſonage. Our eyes ſhut themſelves rapidly on the ſudden flaſh of an unforeſeen light; our arms and our legs arrange themſelves in equilibrium through the fear of a fall; a thouſand other operations demonſtrate that a third perſonage does not always at leaſt preſide over the action of our organs.

Let us examine the automatons the internal ſtructure of which is nearly ſimilar to our own; there is ſcarce any difference between them and us but the nerves of the third pair, and ſome few of the other pairs which inſert themſelves in the muſcles which adminiſter to the ſenſes, and which labour in the chymical laboratory of the bowels, and act independently of the will.—It is a wonderful thing, without doubt, that it ſhould be given to all animals to impreſs movement upon the muſcles which ſerve to make them walk, to contract, to extend, to move again the paws or the arms, the claws or the fingers, to eat, &c. and that no animal ſhould be the maſter of the leaſt action of the heart, of the liver, of the inteſtines, of the courſe of the blood, which circulates, *in toto*, about five times an hour in man.

But have men well underſtood themſelves when they have ſaid that there is in man a little being which commands the feet and the hands, but which cannot command the heart, the ſtomach, the liver, and the pancreas? yet that this little being exiſts not either in the elephant, or in the ape, which make uſe of their exterior members the ſame as we do, and which are ſlaves to their bowels the ſame as we are?

Have they not been ſtill further from underſtanding themſelves when they have ſaid that there is no relation between bodies and a ſenſation; that they are things entirely different ;—for was that the caſe it would be in vain that the Supreme Intelligence ſhould have ordained to the light to penetrate into our eyes to make us ſee, and to the elaſtic particles of the air to enter into our ears to make us hear, if this Intelligence had not alſo placed in our brain a being capable of receiving thoſe perceptions. This being, we have been told, is ſimple, pure, intangible ; it is in a place, without occupying ſpace ; it cannot be touched, and it receives impreſſions ; it has nothing abſolutely of matter, and it is continually affected by matter,

AFTERWARDS we have been told : this little perſonage which cannot have any place, being placed in our brain, cannot in truth have of itſelf any ſenſation, any idea even by objects.—The intelligent Being has in this caſe broken this barrier which ſeparates it from matter, and has willed that it ſhould have ſenſations and ideas occaſioned by matter. The Supreme Intelligence has willed, that it ſhould ſee when the net of the eye ſhould be painted, and that it ſhould hear when the drum of the ear ſhould be ſtruck. It is true that all animals receive their ſenſations without the aid of this little being; but we muſt give one to man; *that* is more noble; man combines more ideas than other animals; he muſt therefore have his ideas in a different manner.

If this be ſo, let me aſk, to what good end the Author of Nature has taken ſo much trouble? If this little being, which men lodge in their brain, can neither by its nature ſee nor hear, if there be no proportion between objects and it, there was no neceſſity either for the eye, or the ear; the drum, the hammer, or the anvil; the cornea, the uvea, the vitreous humour, or the net:—all thoſe things were abſolutely uſeleſs.

Inasmuch as this little perſonage has not any connexion, any analogy, any proportion with any arrangement of matter, this arrangement was entirely ſuperfluous. The Supreme Being had only to ſay, thou ſhalt have the ſentiment of viſion, of hearing, of taſte, of ſmell, of feeling, without there being any inſtrument, any organ.

The opinion, that there is in the brain of man a being, a ſtrange perſonage which is not in other brains, is then at leaſt ſubject to many difficulties; it contradicts all analogy, it multiplies beings without neceſſity; it renders the whole workmanſhip of the human body a vain and deceitful work.

## *The Supreme Intelligence does* ALL.

IT is certain that we cannot give ourſelves any ſenſation; we cannot even imagine one beyond thoſe which we have experienced. Let all the Academies in Europe propoſe a prize for him who ſhall imagine a new ſenſe, no one will ever gain this prize. We can do nothing then purely of ourſelves, whether there be an inviſible and intangible being in our brain, or whether there be not. And we muſt agree, that in all ſyſtems, the Author of Nature has given all that which we have, organs, ſenſations, and ideas which are their conſequences.

SINCE we are thus under the hand of the Supreme Intelligence, *Mallebranche*, notwithſtanding all his errors, has reaſon on his ſide, in ſaying philoſophically, that we are in God, and that we ſee *all* in God, as *St. Paul* ſays the ſame thing in the language of theology, and *Aratus* and *Cato* in that of morality.

WHAT are we then to underſtand by theſe words, to ſee *all* in God? Either they are words void of ſenſe, or they mean that the Supreme Intelligence gives us all our ideas.

WHAT do we mean, when we ſay, to receive ideas? It is not us who form them when we receive them; then it is the Supreme Intelligence which forms them: in like manner as it is not us who form movement; it is this Intelligence. *All* is then an action of this Supreme Intelligence upon all beings.

## *In what Manner* ALL *is the Action of the Supreme Intelligence.*

THERE is in Nature only one principle, univerſal, eternal and acting; there cannot exiſt two, for they would either be alike or different. If they were different, they would deſtroy each other; if they were alike, it would be as if there was but one. The unity of deſign in the *Great All*, infinitely varied, announces one ſole principle; this principle muſt act upon all beings, or it ceaſes to be an univerſal principle.

IF *it* acts upon all beings, *it* acts upon all the modes of every being, There is not then a ſingle mode, a ſingle idea, which is not the immediate effect of a cauſe univerſal, always preſent.

This univerſal cauſe has produced the ſun and the ſtars immediately. Would it not be very ſtrange then, that *it* ſhould not produce in us immediately the perception of the ſun and of the ſtars?

If *all* is always an effect of this cauſe, which cannot be doubted, when have theſe effects begun to act? This univerſal cauſe is neceſſarily active, inaſmuch as it acts, inaſmuch as action is it's attribute, inaſmuch as all it's attributes are neceſſary; for if they were not neceſſary, *it* would not have them.

It has then always acted. It is as impoſſible to conceive that the Eternal Being, eſſentially active in it's nature, ſhould have been idle an eternity, as it is to conceive the luminous Being without light.

A CAUSE without an effect is a chimera, an abſurdity, as well as an effect without a cauſe. There has then been eternally, and there will always be, effects of this univerſal cauſe.

THESE effects cannot come from nothing; they are then eternal emanations of this eternal cauſe.

THE matter of the univerſe belongs then to the Supreme Intelligence as much as the ideas, and the ideas as much as the matter.

TO ſay that any thing is out of *It*, would be to ſay that there is ſomething out of infinity.

THE Supreme Intelligence being the univerſal principle of all things, all things exiſt then in *it*, and through *it*.

### *The Supreme Intelligence inſeparable from all Nature.*

WE muſt not infer from hence, that *it* touches without ceaſing all *it's* works by particular wills and actions. We always make the Supreme Intelligence after our own image. Sometimes we repreſent *it* as a deſpot in his palace, giving orders to his ſlaves; ſometimes as a workman buſied about the wheels of his machine. But can a man who makes uſe of his reaſon conceive the Supreme Intelligence otherwiſe than as a principle always acting, and which has *all* preſent to itſelf? If *it* has once been a principle, *it* is then conſtantly ſo; for *it* cannot change it's nature. The compariſon of the ſun and of the light with the Supreme Intelligence and it's productions, is, without doubt, infinitely imperfect; but however, it gives us an idea, though very weak and faulty, of a cauſe always ſubſiſting, and of it's effects always ſubſiſting.

In ſhort, I only pronounce the name of the Supreme Intelligence like a parrot, or like an idiot, if I have not the idea of a cauſe neceſſary, immenſe, acting, preſent at all it's effects, in all places, and at all times.

The objections oppoſed to *Spinoſa* cannot be oppoſed to me. It was ſaid of him, that he made his God both intelligent and brute; that his God was but a perpetual contradiction.

But here we do not make the Supreme Intelligence the univerſality of things; we ſay that the univerſality of things iſſues from *it*. And to make uſe again of the inſufficient compariſon of the ſun and of it's rays, we ſay that a ray of light darted from the globe of the ſun, and abſorbed in the moſt infectious ſink, cannot cauſe any ſtain in this ſtar. This ſink does not prevent the ſun from vivifying all Nature in our globe.

It cannot be objected to us furthermore, that theſe rays are drawn from the ſubſtance of the ſun; that they are emanations from it; and that if the productions of the Supreme Intelligence are emanations from itſelf, they are parts of itſelf. Thus we ſhould fall again into the fear of giving a falſe idea of this Supreme Intelligence, of compoſing

poſing *it* of diſunited parts,—of parts which are inconſiſtent with each other. We anſwer, as we have before anſwered, that our compariſon is very imperfect, and that it ſerves only to form a weak image of a thing which cannot be repreſented by images. We might ſay, moreover, that a ray of light penetrating into impurity, mixes not itſelf with it, and that it there preſerves it's eſſence indiviſible. But it is better to acknowledge, that the moſt pure light cannot repreſent the Supreme Intelligence. The light is an emanation of the ſun, and *all* is an emanation from the Supreme Intelligence. We know not how; but we cannot, once more I repeat it, conceive the Supreme Being, but as the neceſſary Being from whom all emanes. The vulgar looks upon *It* as a deſpot, who has his executioners waiting in his antichamber.

It ſeems to me, however, that all the images under which men have repreſented this principle intelligent, univerſal, neceſſarily exiſting by itſelf, neceſſarily acting in the immenſe extent, are ſtill more erroneous than the compariſons drawn from the ſun and it's rays. They have painted it ſitting upon the winds, carried in the clouds, ſurrounded with thunder and lightning, ſpeaking to the elements, ſupporting the ſeas: all which is but the expreſſion of our littleneſs. It is, in reality, very ridiculous to place in a fog, at half a league's diſtance from our little globe, the eternal principle of all the millions of globes which roll in the immenſity. Our lightnings and our thunders, which are ſeen and heard four or fives leagues round at moſt, are little phyſical effects, loſt in the *Great Whole*; and it is this *Great Whole* which we ought to conſider, when we ſpeak of the Supreme Intelligence.

It can be only the ſame virtue, which penetrates from our planetary ſyſtem to the other planetary ſyſtems, which are more diſtant a thouſand and a thouſand times from us, than our globe is from *Saturn*. The ſame eternal laws govern all the ſtars; for if the centripetal and centrifugal powers rule in our world, they rule alſo in the neighbouring worlds, and ſo on throughout the univerſe. The light of our Sun and of *Sirius* ought to be the ſame; it ought to have the ſame tenuity, the ſame rapidity, the ſame force, eſcape equally in a right line from all ſides, act equally in direct reaſon of the ſquare of the diſtance.

If the light of the ſtars, which are ſo many ſuns, comes to us in a given time, the light of our ſun pervades to it reciprocally in a given time. Since theſe darts, theſe rays of light, refract themſelves, it is inconteſtable that the rays of the other ſuns darted in like manner in their planets, there refract themſelves preciſely in the ſame manner, if they there meet with the ſame mediums.

Since this refraction is neceſſary to the ſight, it ought conſequently to follow, that there are in theſe planets, beings which have the faculty of ſeeing. It is not probable that this charming uſe of light ſhould be loſt to the other globes. Since the inſtrument is there, the uſe of the inſtrument ought to be there alſo. Let us take our departure always from theſe two principles, that nothing is uſeleſs, and that the great laws of Nature are throughout the ſame: then theſe innumerable ſuns, lighted up in ſpace, give light to innumerable planets; then their rays operate there as upon our globe; then animals enjoy their influence.

The light is of all beings, or of all the modes of the *Great Being*, *that* which gives us the moſt extended idea of the Divinity, how far ſoever it is from repreſenting it.

Indeed, after having ſeen the ſprings of life in the animals of our globe, we do not know if the inhabitants of other globes have the ſame kind of organs. After having aſcertained the weight, the elaſticity, the uſes of our atmoſphere, we are ignorant if the globes which turn around *Sirius*, or *Aldeboram*, are encompaſſed with an air ſimilar to ours. Our ſalt ſeas do not demonſtrate to us that there are ſeas in theſe other planets; but light preſents itſelf every where. Our nights are enlightened by a crowd of ſuns. It is *light*, which, from a corner of this little ſphere upon which man crawls, maintains a continual correſpondence between all theſe worlds. *Saturn* ſees us, and we ſee *Saturn*; *Sirius* perceived by our eyes, may alſo diſcover us; he certainly diſcovers our ſun, though there be between the one and the other a diſtance which a cannon-ball, which travels at the rate of ſix hundred fathoms a ſecond, could not clear in a hundred and four billions of years.

The light is really a rapid meſſenger, which runs in the *Great Whole*, from world to world. It has ſome properties of matter, and ſuperior properties. And if any thing can furniſh a feeble idea commenced, an imperfect notion, of the Supreme Being, it is the light; *it* is every where like him, *it* acts throughout like him.

It reſults, as appears to me, from all theſe ideas, that there is an Intelligence eternal and omnipotent, from whence flow in all times, all beings, and all the manners of being in the whole univerſe.

I know that I am as neceſſarily bounded as the Great Being is neceſſarily immenſe. Thus behold all *that* which I am ſhown by this feeble ray of light emaned into me from the Sun of Spirits.

## *Reflexions on Man.*

THE ſource of the errors into which man has fallen, when he has taken a view of himſelf, has ariſen from that he has thought that he moves of himſelf: he has not reflected that the parts of all bodies, the firſt elements which compoſe them, are the ſame, and produce, by the ſole diverſity of their arrangement, the different bodies which we ſee; he has believed that he has always acted by his own proper energy, as well in his actions as in his wills, which are the ſprings of his actions; that he has always been independent of the general laws of Nature, and of objects, which however, often without his knowledge, and always whether he will or not, this nature cauſes to act upon him. If he had attentively examined himſelf, he would have found that all theſe movements are nothing leſs than ſpontaneous; he would have found that his birth depends upon cauſes intirely out of his power; that it is without his conſent that he enters into the ſyſtem in which he occupies a place; that from the moment in which he is born, to that in which he dies, he is continually modified by cauſes which, in ſpite of him, influence upon his machine, modify his being, and diſpoſe of his conduct. Does not the ſmalleſt reflexion ſuffice to prove to him that the ſolids and the fluids of which his body is compoſed, and that his concealed mechaniſm, which he believes to be independent of anterior cauſes, are perpetually under the influences of theſe cauſes, and would be, without them, in a total incapacity of acting?

Does he not ſee that his natural conſtitution depends not in any degree upon himſelf; that his paſſions are the neceſſary conſequences of this conſtitution; that his wills and his actions are determined by theſe paſſions, and by theſe opinions, which he has not given himſelf? His blood, more or leſs abundant or heated; his nerves and his fibres, more or leſs braced or relaxed; his diſpoſitions durable or tranſient; do they not decide at every inſtant in reſpect to his ideas, to his thoughts, to his deſires, to his fears, to his movements, whether viſible, or concealed? and does not the ſtate in which he finds himſelf, neceſſarily depend upon the air differently modified, upon the aliments which nouriſh him, and upon the ſecret combinations which make themſelves within him, and which conſerve order, or carry diſorder into his machine? In one word, every thing ought to convince man that he is, in each inſtant of his duration, a paſſive inſtrument in the hands of neceſſity.

In a world where all things are connected, where all cauſes are enchained to one another by the Intelligence which preſides over all Nature, there cannot be any energy or force independent and ſeparate. It is then always this Intelligence acting in Nature, which marks to man each of the points in the line which he muſt deſcribe; it is *It* which elaborates and combines the elements of which he muſt be compoſed; it is *It* which gives him his being, his tendency, his particular manner of acting; it is *It* which develops him, which increaſes him, which conſerves him for a time, during which he is forced to fulfil his taſk; it is *It* which places in his way the objects and events which modify him in a manner ſometimes agreeable, and ſometimes prejudicial to himſelf; it is *It* which giving him ſentiment, enables him to chuſe objects, and to take the moſt proper means to conſerve himſelf; it is *It* which, when he has finiſhed his career, conducts him to his diſſolution, and ſo makes him undergo the general and conſtant law from which nothing is exempt. Thus it is that by movement *It* cauſes man to ſpring, ſupports him for a certain time, and at laſt diſſolves him, or obliges him to re-enter into the boſom of a Nature which ſoon will re-produce him ſcattered abroad under an infinity of new forms, of which each of the parts will in like manner run through it's different periods, as neceſſarily as the whole had run through thoſe of it's precedent exiſtence.

Let us not be ſurprized then, if man met with ſo many obſtacles when he wiſhed to render to himſelf an account of his being, and of his manner of acting; and if he imagined ſuch ſtrange hypotheſes to explain the hidden play of his machine, which he ſaw move itſelf in a manner which to him appeared ſo different from that of the other beings of Nature. He ſaw clearly that his body and it's different parts acted, but often he could not ſee *that* which induced him to action; he believed then that he contained within himſelf a principle of motion, diſtinguiſhed from his machine, which ſecretly gave impulſion to the ſprings of this machine, moved itſelf by it's proper energy, and acted according to laws totally different from thoſe which govern the motions of all other beings. He had the conſcience of certain internal movements which cauſed themſelves to be perceived by him; but how conceive that theſe inviſible movements could often produce effects ſo ſtriking? How comprehend that a fugitive idea, that an imperceptible act of thought, could often bring trouble and diſcord into his whole being? In one word, he thought that he perceived in himſelf a ſubſtance diſtinguiſhed from himſelf, endowed with a ſecret force, in which he ſuppoſed characters intirely different from thoſe of his organs themſelves; he did not conſider that the primitive cauſe which makes a ſtone to fall, or his arm to move itſelf, is perhaps as difficult to conceive or to explain, as *that* of the internal movement, of which thought and will are the effects. Thus for want of meditating upon the Intelligence which governs all the movements of Nature, and of viewing this Nature under it's true point of view, of remarking the conformity and ſimultaneïty of the movements of this pretended mover, and of thoſe of his Body, or of his material organs, he judged that *it* was not only a being apart, but alſo of a nature different from all the beings of Nature, of an eſſence more ſimple, and which had nothing in common with all *that* which he ſaw.

From hence have ariſen ſucceſſively all the notions of *ſpirituality*, of *immateriality*, of *immortality*, and all the vague words which have been invented by little and little, by force of ſubtilizing, in order to mark the attributes of the unknown ſubſtance which man believed to be ſhut up in himſelf, and which he judged to be the concealed principle of his viſible actions. To crown the hazarded conjecture which they had made upon this moving force, they ſuppoſed that, different from all other beings, and from the body which ſerved as a cover to it, it ought not like them to undergo diſſolution; that it's perfect ſimplicity prevented it from being able to decompoſe or change it's form; in one word, that it was by it's eſſence exempt from the revolutions to which they ſaw bodies ſubject, as well as all the other compoſed beings with which Nature is filled.

THUS man became double; he looked upon himſelf as a *Whole*, compoſed by the inconceivable aſſemblage of two different natures, and which had no analogy between each other.

HE diſtinguiſhed two ſubſtances in himſelf: the one, viſibly ſubject to the influence of groſs beings, and compoſed of groſs and inactive matter, was called body; the other, compoſed ſimple, and of a pure eſſence, was called ſoul, or ſpirit, and the functions of the ſoul were called ſpiritual and intellectual; man conſidered relatively to the firſt, was called the phyſical man; conſidered relatively to the laſt, he was diſtinguiſhed or deſigned under the name of the moral man.

THESE diſtinctions adopted at this day by the moſt part of philoſophers, are founded only upon gratuitous ſuppoſitions. Men have always believed that they adminiſtered a remedy to the ignorance of things, by inventing words to which they could never attach a true ſenſe. They imagined that they knew matter, all it's properties, all it's faculties, it's ſprings, and it's different combinations, becauſe they had had a glimpſe of ſome of it's eſſential qualities. In aſſociating with it a ſubſtance much leſs intelligible than itſelf, they did only in reality darken the feeble ideas which they had been able to form of it. Thus it is that ſpeculators, in creating words, and multiplying beings, have only plunged themſelves into embarraſſments greater than thoſe which they wiſhed to avoid, and thrown obſtacles in the way of the progreſs of knowledge. As ſoon as facts have failed them, they have had recourſe to conjectures, which too ſoon for them have been changed into realities; and their imagination, no longer guided by experience, has been irrecoverably plunged into the labyrinth of an ideal and intellectual world, which *it* alone had given birth to; it is almoſt impoſſible to draw it out of this labyrinth

rinth in order to replace it in the right road, to which experience alone can give the thread. Experience will ſhew, that in ourſelves, as well as in all the objects which act upon us, there is never aught but matter endowed by the Supreme Intelligence with properties which are given to it. In ſhort, man is a *Whole* organized, compoſed of different parts of matter, like all the other productions of Nature. He follows general and known laws, as well as laws or manners of being which to him are particular and known.

THUS when it ſhall be aſked, What is man? we ſhall ſay, that he is a material being, organized, or formed, ſo as to feel, to think, to be modified in a certain manner peculiar to himſelf alone, to his organization, to the particular combinations which are aſſembled together in him. If we are aſked, What origin we give to the beings of the human ſpecies? we ſhall ſay, that, like all other beings, man is a production of Nature; that he reſembles them in ſome reſpects, and finds himſelf ſubject to the ſame laws; and that he differs from them in other reſpects, and follows particular laws, determined by the diverſity of his own formation. If it is aſked, from whence is man come? we ſhall anſwer, that experience does not put it in our power to anſwer this queſtion, becauſe that we cannot penetrate into the ſecrets of the Supreme Intelligence, and that it cannot intereſt us in reality; it is ſufficient to know that man exiſts, and that he is conſtituted in a manner to produce the effects of which we ſee him ſuſceptible.

But it will be ſaid, Has man always exiſted? Has the human ſpecies been produced from all eternity? Has there been in all time men like unto us? will there always continue ſo to be? Has there been a firſt man from whom all the others are deſcended? Shall ſpecies' without a beginning, be without an end? Are theſe ſpecies' indeſtructible, or do they paſs away like individuals? Has man always been *that* which he is, or before his arrival at the ſtate in which we ſee him, has he been obliged to paſs through an infinity of ſucceſſive developments? Can man at laſt flatter himſelf with being arrived at a fixed ſtate, or muſt the human ſpecies ſtill change? If man is the produce of Nature, it will be aſked if we believe that this Nature can produce new beings, and cauſe the old ones to diſappear? Laſtly, following up theſe ſuppoſitions, it will be wiſhed to know why Nature does not produce under our eyes new beings or new ſpecies?

It appears that we may take, upon all theſe queſtions, indifferent at the bottom, ſuch part as we may pleaſe. For want of experience, it is for hypotheſis to fix a curioſity which lanches out always beyond the bounds preſcribed to our underſtanding. This granted, the contemplator of Nature will ſay, that he ſees no contradiction to ſuppoſe that the human ſpecies, ſuch as it is at this day, has been produced, either in time, or from all eternity: neither does he ſee any in ſuppoſing that this ſpecies has arrived through different paſſages to ſucceſſive development, at the ſtate in which we ſee it. Matter is eternal and neceſſary, but it's combinations and it's forms are tranſient and contingent; and is man any thing, ſave matter combined, of which the form varies at every inſtant?

HOWEVER, certain reflexions ſeem to favour or render more probable the hypotheſis, that man is a production made in time, peculiar to the globe which we inhabit, who conſequently can only date from the formation of this globe itſelf, and who is a reſult of the particular laws which direct it. Exiſtence is eſſential to the univerſe, or to the total aſſemblage of matter eſſentially various, which we ſee; but the combinations and the forms are not eſſential. This granted, though the matter which compoſes our earth has always exiſted, this earth has not always had it's preſent form, and it's actual properties: perhaps this earth is itſelf a maſs detached in time from ſome other celeſtial body, and which conſequently was then in a ſtate to produce beings quite different from thoſe which we find there at preſent, ſeeing that then it's poſition and it's nature ought to render all it's productions different from thoſe which it offers to us at this day.

WHATEVER may be the ſuppoſition which we adopt, plants, animals, and men may be regarded as productions inherent to our globe, and which are proper to it, in the poſition, or in the circumſtances in which it actually finds itſelf; theſe productions would change if this globe, by any revolution, ſhould happen to change place. *That* which ſeems to fortify this hypotheſis is, that upon our globe itſelf, all the productions vary according to the different climates. The men, the animals, the vegetables, and the minerals are not the ſame throughout; they vary ſometimes in a manner very perceivable at a very inconſiderable diſtance. In ſhort, men vary in the different climates in reſpect to colour, ſhape, formation, ſtrength, induſtry, courage, and the faculties of the mind: now what is it which conſtitutes climate? It is the different poſition of the parts of the ſame globe relatively to the ſun, a poſition which ſuffices to put a ſenſible variety between it's productions. We may then conjecture, that if, by any accident, our globe ſhould come to be diſplaced, all it's productions would be forced to change, ſeeing that the cauſes being no longer the ſame, or no longer acting in the ſame manner, the effects ought neceſſarily to change alſo. Tranſport in imagination a man from our planet into *Saturn*, his breaſt will be ſoon torn by too rarefied an air, his limbs will be froze by cold, he will periſh for want of finding elements analogous to his actual exiſtence; tranſport another man into *Mercury*, and the exceſs of heat will ſoon deſtroy him.

THUS all ſeems to authorize us to conjecture that the human ſpecies is a production proper to our globe, in the poſition in which it finds itſelf, and that this poſition happening to change, the human ſpecies would change alſo, or would be forced to diſappear; ſeeing that there are no beings exiſting upon any part of the globe, ſave ſuch as can co-ordain themſelves with *the whole*; *which*, not only gives to them the idea of order, but alſo cauſes them to ſay that *all* is good, whilſt *all* is but in reality that which it neceſſarily muſt be.

THESE reflexions ſeem to oppoſe the ideas of thoſe who have choſe to conjecture that the other globes were inhabited like ours, by beings ſimilar to us. But if the *Laplanders* differ in ſo marked a manner from the *Hottentots*, what difference ought we not to ſuppoſe between an inhabitant of our globe, and an inhabitant of *Saturn* or of *Venus?*

But be this as it may, if we are obliged to go back in imagination to the origin of things, and to the cradle of human kind, we ſhall ſay, that it is probable that man is a neceſſary conſequence of the deconfuſion of our globe, or one of the reſults of the qualities, of the properties, of the energy of which it is ſuſceptible in it's preſent ſituation; that he was produced into the world male and female; that his exiſtence is co-ordinate with *that* of this globe; and that ſo long as this co-ordination ſhall ſubſiſt, the human ſpecies will conſerve itſelf, and propagate itſelf after the impulſion and the primitive laws which have heretofore cauſed it to blow; but that if this co-ordination ſhould happen to change, or if the earth diſplaced ſhould ceaſe to receive the ſame impulſion or influence on the part of cauſes which act actually upon it, and which give to it it's energy, the human ſpecies would change, in order to give place to new beings, proper to co-ordain themſelves with the ſtate which would ſucceed to that which we ſee now exiſt.

O MAN! wilt thou never conceive that thou art but an ephemera? *All* changes throughout the univerſe; Nature contains no conſtant form; yet thou wouldſt pretend that thy ſpecïes cannot diſappear, but ought to be excepted from the general law, which wills that every thing change. Thou who, in thy folly, arrogantly takeſt the title of King of Nature! Thou who meaſureſt the earth and the heavens! Thou, for whom thy vanity imaginest that *all* hast been made, becauſe that thou haſt a ſmall portion of knowledge! There needs but a ſlight accident, but an atom diſplaced to make thee periſh, to degrade thee, to raviſh from thee this portion of knowledge, of which thou ſeemeſt ſo proud.

If any man ſhould refuſe acquieſcence to all the precedent conjectures, and if he ſhould pretend that Nature acts by a certain ſum of laws immoveable and general; if he ſhould believe that man, quadrupedes, fiſhes, inſects, plants are from all eternity, and remain eternally *that* which they are; if he ſhould chuſe to have it, that from all eternity the ſtars have ſhone in the firmament; if he ſhould ſay we ought no more to aſk why man is ſuch as he is, than aſk why Nature is ſuch as we ſee it, or why the world exiſts; we to this, for our parts, ſhall give no oppoſition; and whatever ſyſtem may be adopted, it will anſwer perhaps equally well to the difficulties with which men embarraſs themſelves; and cloſely conſidered, we ſhall ſee that they are of no import to the truths which we have laid down after experience. It is not given to man to know all; it is not given to him to know his origin; it is not given to him to penetrate into the eſſence of things, nor to remount to firſt principles; but it is given to him to have reaſon, good faith, and to admit candidly that he is ignorant of *that* which he cannot know, and not to ſubſtitute unintelligible words and abſurd ſuppoſitions to his uncertainties. Therefore to thoſe, who in order to cut ſhort the difficulties, maintain that the human ſpecies deſcends from a firſt man and a firſt woman created by the Divinity, we ſhall anſwer, that we are thoroughly convinced of Nature, and of the Supreme Intelligence; that we have not any idea of creation, but that we have of formation, inaſmuch as matter is eternal; and that to make uſe of the words *ſoul* and *creation*, is to ſay, in other words, that we are ignorant of the energy of the Supreme Intelligence upon nature, and that we know not how it has been able to produce the men which we ſee. From all eternity, the Supreme Intelligence has known matter. It is contradictory to ſay that one knows a thing which is not. Then matter muſt be eternal.

We have invented this word *Soul* to expreſs feebly the ſprings of our life; in like manner as *Vegetation* is a word which we uſe to ſignify the inexplicable manner in which the Supreme Intelligence cauſes the plant to draw the juices from the earth. All animals move themſelves, and this power of ſelf-motion, is called active force; but there is no diſtinct being which is force; this force muſt then come from elſewhere. We have paſſions, memory, reaſon; but theſe paſſions, this memory, this reaſon, are not, without doubt, things apart; they are not beings exiſting in us; they are not little perſonages which have a particular exiſtence, they are generical terms, invented to fix our ideas. The ſoul, which ſignifies our memory, our reaſon, our paſſions, is but then itſelf a word. What cauſes movement in nature? The Supreme Intelligence. What cauſes the plants to vegetate? This Intelligence. What makes thought in man? This Intelligence.

If the human ſoul was a little perſonage ſhut up in our body, which directed it's movements and it's ideas, would not that, mark in the eternal Artizan of nature, an impotence and an artifice unworthy of him? He would not then have been capable of making automatons which ſhould have in themſelves the gift of movement and of thought? No one will be bold enough to deny but that the Supreme Intelligence has the power to animate the being little known which we call matter; why then ſhould he make uſe of another agent to animate it?

But this is not all; what would this ſoul which you give ſo freely to our body? From whence ſhould it come? Is it neceſſary that the Supreme Intelligence ſhould be continually lying in wait for the copulation of men and women; that *it* ſhould remark attentively the moment that a ſeed iſſues from the body of the man and enters into that of the woman, and that then *it* ſhould inſtantly diſpatch a ſoul into this ſeed? Now if this ſeed ſhould die, what would become of the ſoul? It would either have been created uſeleſsly, or it would be obliged to wait another opportunity.

BEHOLD, it muſt be owned, a ſtrange occupation for the Maſter of nature; he muſt not only continually watch over the copulation of the human ſpecies, but he muſt do the ſame in reſpect to all the animals, for they have all, like us, memory, ideas, paſſions; and if a ſoul is neceſſary to form theſe ſentiments, this memory, theſe ideas, theſe paſſions, the Supreme Intelligence muſt be at work continually to forge ſouls for all the animals of nature.

What idea can I form to myſelf of the Artiſan of ſo many millions of globes, who ſhould be obliged to be continually making inviſible pegs to perpetuate his work? Since I am animated by the Supreme Intelligence itſelf, of what uſe ſhould this ſoul be to me?

Behold a very ſmall part of the reaſons which make me doubt of it's exiſtence.

It is not us who give ourſelves ideas, we have them almoſt always whether we will or no; we have them even when we are aſleep; every operation performs itſelf within us without our having any concern in it. In vain would it be for the ſoul to ſay to the blood and to the animal ſpirits, "Flow, "I beg of you, in this manner, in order "to give me pleaſure;" they would circulate always in the manner that the Supreme Intelligence ſhould have preſcribed to them.—I like better to be the machine of this Intelligence which is demonſtrated to me, than to be the machine of a ſoul of which I doubt.

Man is a *whole* compoſed of the aſſemblage of a great number of parts of different kinds, which, all, are ſubjected irrevocably to the inflexible laws of univerſal mechaniſm: ſolid parts, fluid parts, hard parts, ſoft parts, levers of all kinds, pullies, pipes, glands, liquors, ſpirits; all thoſe things form *a whole*, which, by certain of it's parts, becomes capable of ſentiment and of knowledge, as a pendulum becomes capable of ſtriking the hour.

The ſtructure, the connection, the aſſortment, the uſes, the effects of theſe different parts, are very worthy of our curioſity, and ought to make one of the principal ſtudies of the firſt years of our life.

But *that* which ought above all the reſt to attract our attention, in reſpect to the ſubject under conſideration, is our brain; for it is the brain which is the ſeat of ſentiment and of knowledge.

As the eyes are the organs of ſight, inſomuch that, without the eyes, we ſhould not ſee; in like manner we think not but by the lower part of the brain, where all the nerves terminate, or, which is the ſame thing, from whence all the nerves derive their origin, and from whence they proceed to diſtribute themſelves among the ſenſes; inſomuch that this part of the brain is our internal ſenſe; *it* may be compared, in ſome meaſure, to the ſpider, which in the hole where ſhe dwells, is made acquainted by the threads of her webb, with the different movements which paſs in any one of theſe threads, and which are immediately carried up to her.

It is this part of the brain which is commonly called the ſoul, a name to which the vulgar give a very different ſignification; for they regard the ſoul as a ſubſtance different from the body, and as the principle of all the operations of the living animal; but the word Soul is only an abſtract and metaphyſical term, which has no more of reality in itſelf in reſpect to the reſt of the body, than the word Sight has in reſpect to the eyes, and that of hearing in reſpect to the ears.

It is to no purpoſe to ſearch in ourſelves for a being foreign to our body, which ſhould be the principle of our operations; they are the reſult of the whole, and of the concourſe of the different parts of the body itſelf, dependent upon the laws of univerſal mechaniſm. It is this *whole*, it is this concourſe which forms the living animal.

We only know the different beings which are in the world, by the ſentiment of the effects which we ſee that theſe beings produce in us: I ſee ſuch a body, and I perceive that it excites in me the ſentiment of heat and of light; I ſay, then, that it is hot and light, and in thoſe reſpects different from ice and the other ſolid bodies which I ſee alſo, but which cauſe me not to perceive either heat or light. I feel that I am capable of ſentiment and of thought; therefore I affirm that I have the property of feeling and of thinking. I have an organized body; in conſequence of the different elaborations, and of the different movements which paſs in it, and eſpecially in the brain, I feel that I am affected with ſentiments and with thoughts; I acknowledge then in me the property of feeling and of thinking; and I ſay that I am an organized body which feels and which thinks, dependently upon the different impreſſions which make themſelves upon the organ of thought, which is the interior ſenſe.

Every thing is reputed to be in the ſtate in which we find it, until we have ſome juſt motive to oblige us to look upon it otherwiſe; now I have no reaſonable motive which obliges me to transfer to another being which I do not know, a property which I find ſo intimately attached to my body.

That which has cauſed men to imagine a ſubſtance different from the body, and alone capable of thinking, is the habit in which they are of attributing to beings thoſe properties only which they *ſee* are annexed to them; they do not perceive the connexion between a body and thought, their ignorance is burthenſome to them, and therefore rather than remain undetermined, they imagine a being which they make the unknown agent of this property. Thus it is that when during the night, the vulgar hear any noiſe without ſeeing the body which cauſes it, they attribute it either to a ſpirit, or to ſome other chimerical cauſe. Thus as we think, without knowing how thought is a property of a living and organized body, we have imagined a being which we do not know, in order to make of it the agent of thought.

But that which proves invincibly that we have no need to recur to a ſtrange and ideal being, in order to diſcover that which thinks in us is, the different manners in which we think according to the different ſtates in which the body finds itſelf.

There is the ſtate of waking, and the ſtate of ſleeping; the ſtate of health, and the ſtate of ſickneſs; the ſtate of paſſion, and the tranquil and rare ſtate of reaſon; the ſtate of folly, of madneſs, of melancholy, of joy, of affliction;

tion; the nature and quality of the aliments, even climate, the temperature of the air, all thoſe things influence upon thought.

We find ourſelves exhauſted after having thought a long time together upon any ſubject which requires attention; and as the application of our faculty of thinking, influences upon the reſt of our body, we experience alſo that the labours of the body influence upon the faculty of thought, and that after a toilſome labour, we ſtand in need of reſt, in order not to trouble the operations of the internal parts of our body, which furniſh new ſtrength to the organ of thought.

The different ages of life alſo bring changes in our manner of thinking; we ſee this faculty grow up with the body;

we ſee it grow ſtronger and afterwards weaker with it, and loſe itſelf at laſt with the other properties of our organs.

The conſtitution or quality of the paſte of which each man is formed, produces alſo differences in the manner of thinking.

Now, if it was not the brain which thought, but that thought was a property, or as certain authors will have it, the eſſence of another ſubſtance, the conception of which, as they pretend, excludes all corporéity, how comes it that *that* which paſſes in the body, ſhould be able to influence upon thought? Does the eſſence of the circle influence upon *that* of the ſquare? Each being is *that* which it is in itſelf, independently of another being, at leaſt as to it's eſſential property; the body has no need of the ſpirit to be extended; in like manner, if the ſpirit was a ſubſtance of which the eſſential property was to think, we ſhould think as we pleaſed, and when we pleaſed, and yet we are neither the maſters of our thoughts, nor of our ſenſations; if our ſoul had in itſelf this property of perceiving and of thinking, the different ſtates of the body, and the different elaborations which paſs in it, could not influence upon the exerciſe of this eſſential property of the ſpirit, at leaſt ſo far as we perceive that theſe ſtates do influence it, more eſpecially in ſleep, in ſickneſs, in drunkenneſs, in folly, &c.

All this, it may be ſaid, only happens in virtue of the union which the Supreme Being has eſtabliſhed between the body and the ſoul.

But once more, the union of two ſubſtances cannot bring with it a change in that which they reſpectively have of the eſſential.

This word union is here but a metaphyſical term, drawn from the aſſemblage or junction of bodies; but nothing like it could ever find itſelf between two ſubſtances which ſhould have between them no relation.

Moreover, in order to maintain that two ſubſtances are united, ought we not firſt of all to perceive very diſtinctly theſe two ſubſtances? If the particular exiſtence of each of theſe two ſubſtances is not known to us, how can we aſſure ourſelves with confidence that they are united? Now, I perceive and know but my body, in which I diſcover by ſentiment, the property of thinking,

ing, of being ſuſceptible of joy and of ſorrow, of pleaſure and of pain.

Moreover, theſe Doctors maintain that there is ſo little relation between their pretended ſubſtance which thinks, and the extended ſubſtance; they aſſert ſo affirmatively that the idea of the one excludes the idea of the other, that I cannot conceive how, in their hypotheſis, they can admit this union, and maintain that it conſiſts in a reciprocal commerce between the ſoul and the body;—the charming reciprocal commerce between the ſoul and the body of a madman, of a ſick, of an apoplectick, of a drunken man, of a man who ſleeps! Is not this what the lawyers call a leonine ſociety, where the advantages are all on one ſide?

Moreover, this reciprocal commerce would not be union; it would ſuppoſe only ſuppoſe it: and what union can one conceive between two ſubſtances, which, as they pretend, are ſo different, that the conception of the one excludes the conception of the other?

But can we doubt of this union, ſay theſe Doctors? ſince we perceive ſo indubitably, that *that* which thinks within us, acts upon our extended ſubſtance.

I reply, that this interior ſentiment proves not either the exiſtence, or the union of two different ſubſtances, the one of which is to me intirely unknown; this ſentiment ſerves only to prove that thought is a property of a living body, the organs of which are arrived at a certain point of conſiſtence. I feel indubitably that my organized body is living; I think that I am perſuaded that thought is a property which the Supreme Intelligence has given me, and which I have but becauſe that I am an organized and living body.

Seeing that we only know the properties of beings by the ſentiment which the beings themſelves give us of theſe properties, can I doubt that my body, ſo long as it is living, has not the property of thinking, which I perceive ſo intimately to be an effect of the continuation of my body?

It is to no purpoſe to ſay that the brain and the animal ſpirits being only bodies or extended ſubſtances, they can neither think, nor make to think. Our own experience, founded upon the interior ſentiment, deſtroys this vulgar objection.

It is true that, as we know nothing but by the ſenſes, and as our ſenſes are not ſufficiently delicate to perceive how thought reſults from all the operations which paſs in our brain; we do not know *How* our brain has the property of thinking; but all we can conclude from this default of light, is only our ignorance as to the detail *How*, and not the impoſſibility of a fact of which we have the conſcience.

The blind-man-born knows not how the bodies in which he only diſcovers tactick qualities, can excite the impreſſion of light and of colour, of which he neither has nor can have any idea; but if he ſhould deny theſe properties, becauſe that they are unknown to him, and that he perceives them not in the idea which he has of bodies, would he be very reaſonable to maintain that *that* which he does not know, cannot exiſt?

THESE Doctors are ſtill more wrong than this blind man, becauſe, I repeat it again, we cannot doubt but that we think. Our proper ſentiment and our reflexions have given us the idea of light and of colours; whereas an infinity of facts make us diſcover in the brain the property of thinking; a property, the exerciſe of which depends upon the ſenſes and all the operations which paſs in the body.

BUT thought, ſay they, is not included in the idea of extenſion.—This is becauſe that neither the eyes nor the other ſenſes can there diſcover it; in like manner as the ſenſes of the blind-man-born diſcover not in it either light or colours.

The idea which we have of extenſion is but a metaphyſical idea; extenſion is but an arbitrary term: there is no real being which is extenſion. This word marks but a general idea, drawn from all the properties of objects which affect our ſenſes, and to which we give a common radix, which we call extenſion. Thus it is that figure is an abſtract term, which marks the view of our mind, which conceives in general this manner of being of bodies, inaſmuch as they have an exterior form, without ſtopping itſelf upon any particular form: now, in this ſenſe. there is no being which is figure in general; it is the ſame in reſpect to extenſion; it is but the common radix which we imagine, of all the ſenſible properties which affect our ſenſes: now, thought being interior, and not being able to affect the exterior ſenſes, it can never be conſidered as having the ſame radix as the ſenſible properties, nor conſequently be included in the idea of extenſion; that which has no ſhare in the cauſe of an idea, cannot enter into the comprehenſion of ſuch idea.

Moreover, the objects of one ſenſe are not the objects of another ſenſe: the ſight cannot perceive either ſavours, or odours, or ſounds, or the tactile qualities; and the other ſenſes cannot ſee objects: now, the property which the brain has of thinking, being only exerciſed in the interior of the bony box of the head, from whence iſſue all the nerves which go to form the organs of the ſenſes, it cannot be perceived by any external ſenſe; it is no more then the object of the ſenſes, than colours are of the taſte or of the ſmell; this property is with difficulty ſeiſed by the interior ſentiment, guided by reflexion; but it ſends neither light to the eyes, nor vibration of the air to the ears, nor ſalts to the organs of taſte, &c. Thus it cannot be perceived by the ſenſes, nor conſequently be contained in the idea of extenſion.

Have but one additional ſenſe capable of reflecting upon itſelf, and you will diſcover *How* your brain thinks, and many other properties alſo, which, till then, will be always as much unknown to you as the ſatellites of *Saturn* and thoſe of *Jupiter* were to aſtronomers, before the diſcovery of the teleſcope.

Our capacities are bounded, thoſe of animals are ſtill more ſo; inanimate beings have none at all; there are things heavy and others light; there are bodies

dies ſolid, and others fluid, which are always in movement, as ether and fire. Let us all be content then with our ſtate; let us acknowledge the advantages which the Supreme Intelligence has given us; but let us not ſeek to ennoble ourſelves by chimerical titles.

To be intitled to exclude from every extended being the property of thinking, it would be neceſſary to know exactly all the properties which ſuch a being might poſſeſs, and we can only know thoſe which our ſenſes diſcover to us. But why ſhould we refuſe to it *that* which our conſcience makes us perceive in it? Why ſhould we imagine a being, of which we have no idea, in order to give to it, for it's whole eſſence, the ſole property of thinking? an ideal being, the chimerical union of which with the body, involves in it ſo much impoſſibility and contradiction. Why have recourſe to miracle, when we need only examine ourſelves to acknowledge that *all* which is not contradiction, is under the power of the Supreme Intelligence?

I KNOW that I have a brain; and though *that* which it would be the moſt important to know in the fine parts which compoſe it, eſcapes my beſt microſcopes, yet, as anatomy teaches me that it is *there* that all the ſenſes terminate, and as, moreover, I know by conſcience that it is there where I think, that I judge, that I imagine, and that I remember, &c, I infer from thence that I think, that I judge, that I imagine, and that I remember by means of the brain vivified by the animal ſpirits. It is one ſenſe the more, or rather it is the center of all the ſenſes, in regard to which the animal ſpirits perform the ſame function, as the rays of light do to the eyes, the vibrations of the air to the organs of hearing, the ſalts to the taſte, and the different corpuſculas of odoriferant bodies to the organ of ſmell; in a word, I take myſelf ſuch as I find myſelf, ſuch as I perceive myſelf, and I imagine not in myſelf, a being which I know not, a being of a nature different from mine and from myſelf, a being in which I perceive that the property which men attribute to it of thinking, which makes, as they ſay, all it's eſſence, is but a property of myſelf; a being in ſhort, which, if it was ſuch as they tell me, would be but an abſolute accident, and could not have any relation with my body. I feel that when my body ſeems to pay obedience to the organ of thought and of will, it only follows the movements of it's proper mechaniſm; or, as we have already remarked, it follows the invariable laws of univerſal mechaniſm, a mechaniſm to which all the ſenſes are ſubject, even that of thought; thus, very far from this pretended ſubſtance, which they call ſoul, commanding, it only obeys. And, is it not aſtoniſhing, that whilſt at each inſtant they experience it's impotence and it's ſubordination; whilſt they acknowledge that it can neither give to itſelf the leaſt pleaſure, nor drive off the leaſt pain, nor quicken the digeſtion, nor purify the blood, nor diſſipate the ſmalleſt obſtruction, nor cure the ſlighteſt ſickneſs, nor rectify in madmen the exerciſe of it's pretended eſſential faculty of thinking, they eſtabliſh a reciprocal commerce between the body and the ſoul, and that they define the ſoul a ſubſtance endowed with reaſon,

ſon, and diſpoſed in ſuch ſort that it governs the body? Is it not, on the contrary, itſelf rather governed by the body, to the extreme even of ceaſing to be, when the body loſes it's mechaniſm?

## *Of the Organization.*

ALL matter is living; there is nothing but living matter in the material ſyſtem. Matter can neither loſe it's life, nor it's organiſm. When a *Whole* organical and living diſſolves itſelf into other bodies organical and living, there is no more of dead matter after this diſſolution, than there was of it before; it is a living compoſition which decompoſes itſelf into other living compoſitions, without there being ever the ſmalleſt particle of matter which dies in all theſe compoſitions or decompoſitions. The paſſage of matter from the ſtate of life to the ſtate of death, and it's return from the ſtate of death to the ſtate of life, cannot take place; life being eſſential to matter, it remains always living; it only changes it's form and it's combination. The ſeeds conſidered as moulds or form, paſs away; conſidered as organized matter, they do not paſs. That is to ſay, that there are no deſtructions in nature, but a continual metamorphoſis.

Let us ceaſe then to entertain theſe ideas of matter dead, brute, and inorganic. Let us believe that it is reaſoning ill to ſay, there is no life where we perceive none; it will be the firſt means of attaining to the perception of it throughout the whole.

Daily experience demonſtrates to us an inſtinct or an intelligence in each particle of matter. A grain of ſeed thrown into an earth which is proper and ſuitable to it, chuſes in this earth *that* which is congenial to it's ſubſtance and to it's growth. It is then clear, that this grain muſt be endowed with a kind of intelligence capable of making it act. The default of development in the ſperm ſuſpends the functions, but it does not annihilate either the one or the other. The ſperm conſerves the whole fund of the organical apparatus of the body which ſhall reſult from it. The principle which is united to it has in like manner the foundation of the operations which it ſhall produce at the time of, and in proportion to, the development of the ſperm. It has the faculty of thinking, of willing, of perceiving, of moving, and of remembring. But the ſubject-matter which muſt bring it into action, has not yet acquired *that* which is neceſſary to that end. (A new generation ought only to be regarded as the manifeſtation of a body which exiſted before under an imperceptible form.) There is nothing uſeleſs in nature; if there was only one ſingle inutility, it would be more probable that chance had preſided over *it's* formation, than it would be that *it* had had for it's author a perfect Intelligence. For it would be more ſingular that an infinite Intelligence ſhould act without deſign, than it would be aſtoniſhing that a blind principle ſhould conform itſelf to order by mere accident. But every thing has it's deſtination.

Organization is a quality eſſential to matter, a quality as eſſential to it as extenſion. It is the baſe of the faculties common to all beings, which are thoſe of ſelf-nouriſhment, of growth or increaſe, and of procreation. We may divide, break, cut to pieces organical beings; we ſhall deſtroy the form and the total ſtructure, without deſtroying the organization of the parts; *that* we cannot deprive them of ſo long as they are matter; they remain organical in whatſoever ſtate they ſhall be, and conſerve the faculties of ſelf-nouriſhment, of growth, and procreation, in order to diſplay them when circumſtances ſhall be favourable.

EVERY thing that dies, only changes form. There is not one grain of the ſubſtance which is annihilated, inaſmuch as all matter is living and imperiſhable.

Animals, plants, and minerals are all modifications of organized matter; they all participate of one ſame eſſence, without having any other diſtinctions between them than the meaſure according to which they ſhare in the properties of this eſſence.

Nothing periſhes in Nature. Man, and every thing which breathes, after being ſtripped of the groſs envelope, of this ſpecies of maſque which ſurrounds and covers them, and which, for example, makes of them men, or any other kind of animal; inſects, or any other compoſed being, ſhall ſubſiſt living in their firſt form, and ſhall flutter about in the air till favourable occaſions happen of making them re-appear under other forms.

Man makes a part of the univerſe, the part has relations to the whole.

The univerſe is an immenſe ſyſtem of relations; theſe relations are determined reciprocally the one by the other. In ſuch a ſyſtem, there can be nothing of the arbitrary. Each ſtate of every being whatſoever is determined naturally by the antecedent ſtate; otherwiſe the ſubſequent ſtate would have no reaſon for it's exiſtence.

A LIVING body which diſſolves itſelf, dies not in ſo doing; but each part carries with it it's life and it's ſoul, when the body corrupts itſelf.

EVERY aſſemblage of matter thinks, and *that thought* which has ſubſiſted in the aſſemblage, ſubſiſts under other modifications in the parts diſunited after the diſſipation of the aſſemblage.

## *Of Movement.*

IT is movement which gives weight to matter, which of itſelf is neither heavy nor light. Movement is the known principle of the gravitation of bodies. Vegetation is the effect of movement, alſo the generation and the life of organized bodies are produced and conſerved by movement. It is to movement that we muſt attribute every phenomenon; and thanks to the bounds of human knowledge, every thing is to us phenomenon.

There is no movement without direction; for movement without direction would be a movement every way at once, which is contradictory. Direction is a determination towards one ſide rather than towards another. This direction can only be the effect of an intelligence. The exiſtence of movement proves then the exiſtence of an intelligence.

Thus, all movement, it's laws, it's effects, are the work of a free being, infinitely powerful, infinitely intelligent.

If a Supreme Intelligence governed not matter and movement, all would be in confuſion. Now, we ſee that in every thing which iſſues forth from matter, there is arrangement and order; conſequently an infinite power muſt preſide over it.

If activity ought to enter into the definition of matter, it ought alſo to expreſs the eſſence of it; for it is certain that a definition, in order to be good, ought to contain all the properties of the thing defined, or theſe properties ſhould neceſſarily flow out of it; without *that*, the definition is not ſufficient to diſtinguiſh the thing, it is confuſed and incompleat. This granted, it ſeems to me that men have not hitherto perfectly defined matter in ſaying that it is extended, inaſmuch as from extenſion alone many of it's modifications can by no means follow. It is for this reaſon that they have not regarded the effects which movement produces in it as eſſential to matter, but as adventitious, and as of a different nature, inaſmuch as they have not comcomprized them in it's definition: whereas, if in the definition of matter, they had cauſed to enter activity as well as extenſion, (together with ſolidity, as is done by Locke) we ſhould ſee all it's effects naturally flow out of it, and we ſhould be no more obliged to have recourſe to any other cauſe to explain them, than to explain the conſequences of extenſion.

In ſuppoſing that it is an error to ſay, that movement is foreign to matter, it muſt be admitted that all the definitions which are generally given of it, being founded upon this definition, have contributed much to fortify this error in the minds of men. From thence they have accuſtomed themſelves to deprive matter of movement, and they have made to themſelves from this idea a principle which they have believed ſelf-evident, and which they have never afterwards dared to call in doubt. Moreover, we know that thoſe who have propoſed to themſelves to introduce falſe opinions, with a view to fortify their deſigns, or to get a name; or who have wiſhed to maintain their authority in maintaining abſurd opinions previouſly eſtabliſhed, have laid it down invariably, that *we ought not to diſpute upon principles*; after which they have given for principles all the maxims which they judged conducive to their own views. But be this as it may, if movement is eſſential to matter, it is eſſential alſo to make it enter into the definition of matter.

I ADMIT it; before I give ſuch a definition of matter, it is neceſſary to begin by proving clearly that activity is neceſſary to it. And this is what I purpoſe to myſelf to do in the courſe of this writing; and I ſhall endeavour to make the definition which I give, go down, by the reaſons which I ſhall adduce to prove that, in Nature, all matter, as well as all it's particles, have always been in movement, and can never be deprived of it; that the ſmalleſt particles which are contained in the center of the hardeſt and largeſt rocks, in the center of a bar of iron, or of an ingot of gold, are in an action as conſtant as the ſmalleſt particles of fire, of air, or of water, though according to different degrees, and different determinations, the ſame as the laſt mentioned are, when compared with one another: for this action is equally internal and neceſſary to them all, as well as to all the other claſſes of matter in the univerſe, though their ſpecifick movements be ſo various, which ariſes from the different manners in which they affect each other. But it will be time enough to ſeek after a new definition of matter when we ſhall have evidently ſhewn that movement is eſſential to it.

I MAINTAIN that matter cannot be conceived without an action proper to itſelf, or without ſome effect of this action: and I alſo maintain that matter can no more be conceived without movement than without extenſion, and that the one of theſe properties is as inſeparable from it as the other. If any one would endeavour to give me an idea of matter without action, it would be neceſſary, in order to accompliſh his end, that he made of it ſomething that was deprived of all colour, of all figure, that was neither heavy nor light, rough or ſmooth, ſweet or ſour, hot or cold; in one word, ſomething devoid of all the ſenſible qualities, deſtitute of parts, of proportions, and of all relations; ſeeing that all thoſe things depend immediately on movement, as well as the forms of all corporeal beings, their generations, their ſucceſſions, their corruptions,

ruptions, their infinite combinations, their tranſpoſitions, and the arrangements of their parts, which are undoubtedly the natural effects of movement, or rather which are movement itſelf, deſigned under theſe different names, and under theſe determinations.

THE diviſibility of matter, which is generally acknowledged, is again a convincing proof that we are not able to conceive it without movement, ſince it is movement which alone divides and diverſifies it; conſequently, movement is preſuppoſed, as well as extenſion, in the idea of diviſibility; from whence we muſt conclude, that movement is as eſſential to matter as it's extenſion. In effect, how be able to conceive that matter is a ſubſtance or any thing, unleſs it be endowed with action? How elſe can matter be the ſubject of accidents,

dents, according to it's vulgar definition, ſince all accidents are but the different determinations of action in matter, diverſified accordingly as they are differently placed relatively to our ſenſes, but which really are not diſtinguiſhed in our imagination, or in the thing even in which we ſay that the accidents exiſt? Roundneſs differs in nothing from a round body; it is the ſame with all the other figures. In fact, roundneſs is not the name of a real being; it is only a word deſtined to expreſs the particular manner of being of a certain body. Hot and cold, ſounds, ſmells, colours, are not even the manners of being, or the poſtures of things; they are but the names which we give to the manners in which they affect our imagination; for moſt things are conceived by us relatively to our proper body, and not relatively to their true nature. Behold why *that* which is ſweet to one, ſeems ſour to another; why *that* which gives pleaſure to the man in health, is painful to the ſick man; yet the organs being nearly the ſame in the moſt part of men, they are conſequently affected much in the ſame manner, though with differences more or leſs marked. But theſe differences, as well as all the others which we ſee in matter, being due to different changes, or theſe things themſelves being only the conceptions of different movements, I think I may boldly affirm, that matter is never conceived but acting, which I hope to prove to be equally true of *that* which is called Reſt itſelf.

THIS conſidered, let men deprive, if they can, matter of movement, then I ſhall divine in advance the idea which they will have of it; it will be the ſame as *that* which thoſe have pretended to give us of it, who have heretofore attempted to define it: according to them, the firſt matter was *neque quid, neque quale, neque quantum, neque quidquam eorum quibus Ens denominatur*. Which means, in many words, that matter is nothing at all.

HOWEVER, they pretend that the extenſion of matter is very eaſy to be diſcovered, if even it be not ſelf-evident; but they ſay that it is not ſo in reſpect to it's activity. In *that* I cannot be of this opinion; and I maintain that the one of theſe properties is as eaſy to be diſcovered as the other, and that neither of them can be miſtaken or called in doubt, ſave by thoſe who only judge from appearances, habit and authority, without deigning to conſult their own reaſon.

ſon. In following this method of reaſoning, they might prove to us that the moon is no bigger than a cheeſe; for as the vulgar do not believe that there is any extenſion when they do not perceive any ſenſible object, in like manner many perſons, who would be much offended in being claſſed among the vulgar in many other things, agree nevertheleſs with them in believing that there is no action when they perceive no local and determinate movement. Experience ought to convince us that the multitude of adverſaries proves nothing againſt the truth of any poſition whatſoever; things the moſt clear and the moſt ſimple have been great myſteries for whole ages together; indeed it is not ſurprizing that nothing has been found where nothing has been ſought: but I flatter myſelf, that in the courſe of a very few pages, I ſhall ſhew *what* has conducted all the various ſects of philoſophers, as well as the vulgar, to believe matter to be inert or deſtitute of activity; for though many of the former have very clearly perceived it's univerſal movement, yet, blinded by the prejudices of infancy, they have attributed it to all ſorts of cauſes, in preference to the true one; a conduct which has often forced them to imagine ridiculous and whimſical hypotheſes.

I KNOW that many learned philoſophers maintain the exiſtence of a vacuum, an idea which ſeems founded upon the inactivity of matter. I alſo know that ſome among theſe philoſophers deny with the *Epicureans* that the vacuum has a ſubſtantial extenſion, and pretend that it is nothing; whilſt others of them make of it an extended ſubſtance which is not, according to them, either body, or ſpirit. Theſe notions have given birth to an infinity of diſputes upon the nature of ſpace. The opinion of a vacuum is one of the innumerable erroneous conſequences which have reſulted from the definition of matter by it's extenſion alone, from it's having been ſuppoſed deſtitute of action, and from it's having been ſuppoſed to be divided into real parts, independent the one of the other. After ſuch kind of ſuppoſitions, it is impoſſible not to conclude that there muſt be a vacuum, and it is equally impoſſible not to conclude a multitude of abſurdities. That which we call parts in matter, is only, as may be proved, the different manners of conceiving it's affections, it's diſtinctions, it's modifications; thus theſe parts are but imaginary, or relative, and not real, and abſolutely divided. Water, as ſuch, may be produced, divided, and corrupted, augmented or diminiſhed, but not when it is conſidered as matter.

In order to avoid every thing equivocal on this head, it is right for me to give notice that, by body, I mean certain modifications of matter, which the mind conceives as ſo many limited ſyſtems, or particular quantities mentally abſtracted; but which are not really ſeparated from the extent of the univerſe. We ſay, then, that a body is greater or leſs; that another is broken to pieces or diſſolved, &c. when it experiences different changes in it's modifications; but we cannot ſay properly that matters are greater or leſs the one than the others, becauſe there is but one kind of matter in the univerſe; and if it is infinitely extended, it cannot have parts abſolutely independent of one another, ſeeing that the parts or atoms are only conceived, as I have juſt ſaid bodies were.

We have invented an infinity of words to aid our imagination, which are uſeful as ſcaffolds are to workmen; but they ought to be taken down when the edifice is finiſhed, and not be taken for the pillars or the foundations. Of this kind are, for example, the words Great and Little, which are but compariſons which our mind makes, and not the names of poſitive ſubjects. A man is great relatively to his child, and little compared to an elephant, and the child is great compared to it's bird, &c. Theſe words, and thoſe of the ſame nature, are very uſeful when ſuitably applied; but we make a frequent abuſe of them; and of relatives made to deſign modes, we make realities, beings poſitive and abſolute. Such is the abuſe which is made of the words *bodies*, *parts*, *particles*, *ſomething*, *a certain being*, &c. They may be well diſpenſed with in the ordinary occurrences of life; but they ought not to be ſuffered in the ſpeculations of philoſophy.

OTHERS have only admitted in nature parts nominal and relative, and not parts real and poſitive; yet, notwithſtanding their ſubtleties, they have not been able to alledge any proof againſt the exiſtence of a vacuum which their adverſaries have not been able eaſily to deſtroy, ſeeing that they agreed with them in ſuppoſing matter deſtitute of action. Theſe who are *au fait* in philoſophy know that the difficulties are equal on both ſides; which has cauſed many people to think that the thing was in it's nature inexplicable. They attributed it, as they often do very unjuſtly, to their own underſtanding which was not ſatisfied, and not to the precarious ſuppoſitions made on the one hand and on the other, which they had not perceived.

There is nothing more certain than that of two contradictions, the one muſt always be true, in like manner as the other muſt be falſe; thus, though it be indubitable either that there muſt be a vacuum, or that all is full, (to make uſe of their own improper expreſſions) though it be evident that the truth lies within the narrow compaſs of theſe two propoſitions, yet neither party has been able to demonſtrate which was the true one; becauſe both ſides have taken their departure from a falſe principle, from whence there could only flow falſities and abſurdities.

But if we are once convinced, as I hope we ſoon ſhall be, that matter is active as well as extended, all the difficulties concerning a vacuum will diſappear inſtantly. For as the particular and limited quantities which we call bodies, are but different modifications of the general extenſion of matter which includes them all, and which they can neither augment nor diminiſh; in like manner all the local or particular movements of matter are but the different determinations of it's general action, which directs them towards one ſide or towards another by the aid of ſuch or ſuch a cauſe, in ſuch or ſuch a manner, without theſe movements either augmenting or diminiſhing the general action.

In all the treatiſes which have been wrote upon the ordinary laws of movement, we find the different degrees of movement which a body loſes or acquires; theſe laws have for their object the quantity of the action of particular bodies one upon another, and not the action of matter in general; in like manner as the particular quantities of matter are meaſured by other leſſer quantities, and not the extent of the whole. The mathematicians calculate the quantity, and the proportions of movement, when they ſee the bodies act one upon another, without embarraſſing themſelves with the phyſical reaſons, which they leave to philoſophers to explain. Theſe latter would explain them much better, if they began by ſtudying the facts and obſervations of mathematicians, as *Newton* has very well obſerved.

THERE is not in matter one inſeparable attribute, which has not an infinite number of modifications which are as proper to it as extenſion. It is the ſame with action and ſolidity; yet it is neceſſary that all the attributes concur to produce the particular modes of each; becauſe that they are but the ſame *matter* conſidered under different points of view. Thus in ſaying, as a multitude of philoſophers have ſaid, that if there was no vacuum, there would be no place where the body C. could place itſelf, nor any unoccupied ſpace into which the body B. might puſh the body C.; in ſpeaking thus I ſay, that it is only having of ſpace the groſs ideas of the people; it is ſuppoſing that the points B. and C., as well as all or the greateſt part of the points which ſurround them, are really fixed and in an abſolute repoſe. But a true philoſopher is not made to give into the errors of the multitude; and if I ſucceed in proving that action is natural, eſſential, intrinſick and neceſſary to matter, we ſhall ſoon ſee that theſe objections are of no force; and that the examples which they oppoſe to us of the circles formed by contiguous balls, and of a fiſh upon the point of jumping into the water, &c, prove nothing, ſeeing that all theſe things ſuppoſe an abſolute repoſe, as well as the generation of movement, which is preciſely the thing in queſtion. If *it* could be proved, there would be no ſolid argument to anſwer thoſe which are made uſe of to eſtabliſh a vacuum.

I HAVE already touched upon the abuſe of words in philoſophy; we have a proof of it in particular, in certain terms uſefully invented by the mathematicians, but ill underſtood and perverted by others, and often ill applied by themſelves; which can never fail to happen when they take abſtract notions for real beings, and afterwards make them the baſis whereon to found hypotheſes: thus it is that mathematical lines, ſurfaces, points, have been regarded as things really exiſting; from whence has been drawn an infinity of falſe concluſions. To ſay, for example, that extenſion is compoſed of points, is to ſay that length and depth are formed by that which is neither long, nor broad, nor deep, nor the meaſure of any quantity.

It is thus that the word *infinite* has given room for very great embarraſſments, which have cauſed to ſpring up a crowd of errors and ambiguities. Number has been rendered infinite; as if it followed, becauſe units may be added to one another without end, that there actually exiſted an infinite number: thus it is that they have made an infinite time, they have made the thought of man infinite, they have imagined aſymtote lines, and many other progreſſions without end, which are only infinite relatively to the operations of our mind, and not ſo in themſelves; for that which is really infinite, ought to exiſt actually as ſuch, whereas that which is but potentially infinite, is not ſo poſitively.

But there is no word which men have more ill applied, and which conſequently has given room to more diſputes than that of *Space*, which is but an abſtract notion, (as we ſhall ſee in the ſequel) or the relation which any being has to other beings which are at a diſtance from it, without regard being had to the things which lie between them, although theſe things have a real exiſtence. Thus the place is either the relative poſition of a body, regard being had to the other bodies which ſurround it, or it is the place which the body fills with it's own proper volume, and from whence we conceive it to exclude all other bodies; theſe are but pure abſtractions, ſeeing that the capacity differs not ſrom the body contained. In like manner, diſtance is the meaſure between any two bodies, without regard being had to the things of which the extenſion is thus meaſured. Neverthelcſs, as the mathematicians have had occaſion to ſuppoſe a ſpace without matter, the ſame as they have ſuppoſed a duration without beings, points without quantities, &c, the philoſophers, who have not been able without that to account for the generation of movement in matter which they looked upon as inactive, have imagined a real ſpace diſtinct from matter, which they have looked upon as extended, incorporeal, immoveable, homogeneous, indiviſible, and infinite.

But the whole queſtion depends on the action and infinity of matter; for,

1°. If matter itſelf is eſſentially active, there is no need to recur to this invention in order to procure it movement; and it is not neceſſary to ſearch after the generation of movement.

2°. If matter is infinite, it cannot have ſeparate parts which move themſelves independently the one of the other in right lines, or in curved lines, notwithſtanding theſe modifications which we diſtinguiſh by the name of particular and diviſible bodies.

3°. MATTER in like manner muſt be homogeneal, if it has action of itſelf, as well as extenſion and ſolidity, without being divided into parts.

4°. IF matter is infinite, the univerſe can have no local movement; ſince that out of itſelf, there cannot be any fixed points to which it can be ſucceſſively applied, nor any place into which it can paſs.

I AM thoroughly ſenſible that I combat an opinion univerſally received, and that even in particular in what I ſay upon ſpace, I am ſaid to have againſt me the greateſt man the world has ever known; but he will loſe nothing of his glory, even though he ſhould happen to be miſtaken on this occaſion, ſeeing that the demonſtrations and diſcoveries which his unparalleled book contains, will not on that account remain the leſs true. As for me, I can no more admit an abſolute ſpace diſtinct from matter, as the place of it; than I can admit an abſolute time diſtinct from the things of which we conſider the duration: yet there is room to think that not only *Newton* has believed thoſe things, but that he has alſo put them upon the ſame footing. "Times and "ſpaces," ſays he, "are the proper "places of themſelves, as well as of "all beings: all beings are placed in "time, as to the order of ſucceſſion, "and in ſpace, as to the order of ſitua-"tion; it is in their eſſence to be "places, and it is abſurd to ſay that "primitive places move themſelves. "Thus theſe places are abſolute, "and the tranſlations from them are "the only abſolute movements." (Vide his Mathematical Principles, p. 7.)

I AM perſuaded that theſe words are capable of being interpreted in a manner favourable to my opinion, but I prefer the taking them in the ſenſe generally attached to them; the more ſo as *that*, (as I have before obſerved) ought to do no injury to the works of this great man.

IN regard to what men alledge in favour of the inactivity of matter as well as of the exiſtence of a vacuum, when they ſay that a body is heavier or lighter than another body of the ſame volume; it is neceſſary for them to ſuppoſe that gravity and levity are not pure relations, the reſults of peculiar internal diſpoſitions, or the compariſons of particular ſituations and exterior preſſions; they muſt neceſſarily look upon them as real beings, as abſolute and inherent qualities, a ſentiment which has long been rejected by all the learned world, and which is contrary to the notions univerſally entertained in mechanicks. It would not be very difficult to prove, even to perſons of a very moderate capacity, that there can neither be gravity nor lightneſs in the chaos which they ſuppoſe, and that theſe qualities depend only upon the fabrick or mechaniſm of the univerſe; that is to ſay, are the neceſſary conſequences of the world's actually exiſting, the neceſſary effects of it's preſent arrangement, but not the eſſential attributes of matter, ſeeing that the ſame body becomes alternately heavy or light, according as it is placed among other bodies, and inaſmuch as there is nothing better known, than that many beings are ſometimes in a ſtate neither of levity or gravity. To ſuppoſe that any part of matter has in itſelf either gravity or levity, becauſe we ſee theſe effects in the fabrick of the univerſe, or to deduce theſe effects from the common laws of gravitation, is not only to ſuppoſe that matter is equally affected in every place, but alſo that the wheels, the ſprings and the chains of a watch might, being ſeparated, produce the ſame movements which they produce when united together.

It is nevertheleſs after ſuppoſitions thus falſe, that philoſophers, in the ſyſtems which they have imagined concerning the formation of the univerſe, have invented the fable of the four elements which came to place themſelves according to their different degrees of gravity and levity. The earth, according to them, placed itſelf undermoſt, or at the center; afterwards came the waters; next, the air; and uppermoſt of all, the fire.

All ranks and ſects of people have been ſuperſtitiouſly attached to theſe ideas of a primitive chaos, a notion as confuſed and monſtrous as is the import of it's name; and which, in all it's parts, is founded upon ſuppoſitions not only arbitrary, but entirely chimerical and falſe. Such are the groſs ideas which men have formed to themſelves of the number and non-mixture of the four elements, drawn from bodies the moſt compounded in the univerſe; ſuch the levity and gravity of the particles of matter; and ſuch the ſeparation of that which they call the ſeeds of beings; a ſeparation which, ſay they, could not be made without this levity and gravity; nor indeed, on theſe very conditions, without the aſſiſtance of an all powerful Architect, whom they have not always taken care to provide, or whom they have furniſhed with ſuch wretched tools, and with ſo poor a contrivance, that they have proved only the weakneſs of the underſtanding of thoſe who have formed the world after their own model.

In one word, it is after a ſuppoſition thus precarious that men have decided that there was a time when matter was in diſorder, without either telling us how long this diſorder has laſted, or what was the cauſe of this confuſion. This may ſerve to prove to us, how little we ought, in other caſes, to depend upon univerſal conſent, or rather that we ought naturally to be diſtruſtful of the epidemical errors which ſpread themſelves abroad under the impoſing name of univerſal conſent.

But let us not fall into digreſſions, though they very naturally preſent themſelves. It is agreed that the moſt part of bodies are actually in motion; but it is ſaid that *that* does not prove them always to have been ſo, and that there are not others which are not in an abſolute repoſe. I agree that, though the thing be true, ſuch a conſequence does not neceſſarily follow; yet, before we come to treat of abſolute Reſt, it may not be amiſs to ſee how far this actual movement, touching which men agree, extends itſelf. Though the matter of the univerſe be throughout the ſame, yet, regard being had to it's different modifications, *it* is conceived as divided into an infinity of particular ſyſtems or vortexes of matter; theſe ſyſtems or vortexes ſubdivide themſelves again into others more or leſs great, which depend one upon another, as each of them depends upon the *Whole*, in their centers, their tiſſue, their forms, and their coherence. Our ſun, for example, is the center of one of theſe great ſyſtems which contains a great number of ſmaller ſyſtems within the ſphere of it's activity, in like manner as do all the planets which turn around it; theſe ſyſtems are ſubdivided into others ſmaller which depend upon them, as the Satellites of Jupiter depend upon him, or as the moon depends upon the earth. Our globe again is ſubdivided into atmoſphere, earth, water, &c. Theſe laſt ſubdivide themſelves into men, quadrupedes, birds, plants, trees, fiſhes, worms, inſects, ſtones, metals, and an infinity of other different beings. As all theſe beings are connected, or depend one upon another, in like manner (to make uſe of the ordinary language) their matter is mutually reſolved into each other: for not only earth, air, water, and fire, are intimately united and combined, but by a continual revolution, they are transformed one into another. The earth becomes water, the water changes itſelf into air, the air converts itſelf into ethereal matter, and afterwards they ſerve to form combinations without number and without end. The animals which we deſtroy, contribute to conſerve us, till deſtroyed ourſelves, we contribute to the conſervation of other beings; we become graſs, plants, water, air, or other ſubſtances which ſerve to produce other men, other animals; which others in their turn change themſelves into ſtone, wood, metals, minerals, or into new animals, or elſe become parts of theſe beings and of many others; inaſmuch as animals and vegetables daily conſume and devour one another. So true it is that each being lives by the deſtruction of another.

ALL the parts of the univerſe are continually in a movement which produces and deſtroys, deſtroys and produces; the greateſt ſyſtems have their continual movements as well as the ſmalleſt particles; the globes placed at the centers of tornados, turn upon their proper axis, and each particle of the tornado gravitates towards it's center. Howſoever flattering an idea we may have formed of ourſelves, our bodies differ in nothing from thoſe of other beings; like them, they increaſe or diminiſh by nutrition and evacuation, by accretion, tranſpiration, and by many other ways, by which we impart a ſhare of our ſubſtance to other bodies, from which we receive ſomething in exchange. It reſults from thence that we are not to-day the ſame that we were yeſterday, and that we ſhall not be to-morrow the ſame which we are to-day. So long as we live, we are in a continual flux and reflux, and when we are in the ſtate of a total diſſolution of our ſyſtem, which happens by our death, we become part of an infinity of other beings which poſſeſs themſelves of our ſpoils; our carcaſes mix in part with the duſt and the waters of the earth; a part evaporates in the air, where it hovers about in different places, and mixes and incorporates itſelf with an infinity of beings.

No part of matter is attached to any one form or figure; all things change perpetually, that is to ſay, that being in a continual movement, they are divided, uſed, triturated, diſſolved by other parts which take their figures, and theſe theirs, and thus inceſſantly keep changing forms; the earth, air, fire, and water, iron, wood, marble, plants, and animals, are rarefied or condenſed, liquefied, congealed, diſſolved or coagulated, are, in a word, by an infinity of movements, changed into one another; the whole ſurface of the earth ſhews to us theſe changes at every moment; there is no being which continues the ſame for an hour together: now, all theſe changes being only movements of different kinds, are indubitably effects of an univerſal action. But the changes in the parts produce no change in the whole; for it is evident that the alterations, the ſucceſſions, the revolutions, the continual tranſmutations of matter can no more increaſe or diminiſh the total of the univerſe, than the alphabet can loſe any of it's letters by the perpetual combinations which are made of them in ſo many different words and languages. In fact, as ſoon as a being quits one form, it takes another; it quits, as we may ſay, the ſcene in a certain dreſs, in order ſoon to re-appear upon it in a new diſguiſe; which cauſes in nature a perpetual youth and vigour, which is never followed by decline or decrepitude, as ſome men who have neither conſulted experience nor reaſon have fooliſhly imagined. The univerſe, as well as all it's parts, remains always the ſame.

The great ſyſtems of the univerſe, being ſubdivided into ſmaller ſyſtems of matter, the individuals which compoſe theſe leſſer ſyſtems, periſh indeed, without however being annihilated; they conſerve their form for a time in proportion to the ſtrength or weakneſs of their diſpoſitions, of their ſtructure, or of their conſtitutions; it is this that we call the natural age, or the time of the duration of ſuch a being; yet if this conſtitution be deſtroyed before it has finiſhed it's ordinary period, by movements more powerful, iſſuing from the beings which ſurround it, we give to this change the name of accident or violence; as when a young man is aſſaſſinated, we ſay that he has periſhed by a violent death, that he is dead before his time.

The ſpecies' perpetuate themſelves by propagation, notwithſtanding the decline and deſtruction of individuals; the death of our bodies is but matter which goes to re-cloath itſelf in ſome new form: the impreſſions of the wax may vary, but the wax remains always the ſame, and in reality our death is the ſame thing in effect as our birth. In fact, to die is but to ceaſe to be *that* which we were before; to be born, is to begin to be *that* which we were not till that moment.

Before I quit this head, I muſt obſerve, that in conſidering that the generations without number which have ſucceeded each other upon this globe, have by their death re-entered into the common maſs, and are diſperſed and combined with it's other parts; and in joining to *that* the flux of matter which tranſpiration cauſes inceſſantly to iſſue from the bodies of men during their life-time, as well as the nouriſhment which they daily take, the inſpiration of the air, and the continual additions of matter which augment their volume; in conſidering, I ſay, theſe things, it ſeems probable that there is not upon the ſurface of the entire earth a particle of matter which has not made part of man. This reaſoning applicable to our ſpecies, is equally true relatively to every order of animals, of vegetables, and of beings, ſeeing that all have been diſſolved and changed into one another by continual revolutions; inſomuch that nothing is more certain than that each material being is all things, and that all things reduce themſelves to one alone.

The ſenſible effects, then, which we ſee, force us to acknowledge a continual movement in beings. It is agreed that the particles of air, of water, of fire, of ethereal matter, of vapours, are in a perpetual action; movement is alſo acknowledged in the imperceptible corpuſcles which emane from all the great and viſible bodies, which, by their maſs, their figure, their number, and their movements, act upon our ſenſes, and produce in us the ſenſations and the ideas which we have of colours, of odours, of ſavours, of heat, of cold, &c. But at the ſame time, they appeal to our ſenſes for proof that there are bodies which are in an abſolute repoſe. They cite, for example, rocks, iron, gold, lead, timber, and the other bodies which never change place without the aid of an exterior force. I anſwer, that it is the reaſon and not the ſenſes, which ought to guide our judgment in this matter; our ſenſes cannot deceive us when we call in reaſon to our aid; when the ſenſes ſhall be united to the reaſon, I ſhall not heſitate to leave the queſtion to their deciſion.

We muſt then always diſtinguiſh between the internal energy, or eſſential action of all matter, without which it could not be ſuſceptible of any alteration or diviſion, and the local exterior movements or changes of places, which are but particular modifications of the eſſential action which is the ſubject.

Particular movements being determined by other movements more powerful, which render them either direct, or circular, or rapid, or ſlow, or continued, or interrupted, according to the movements of the other bodies which they meet with, which follow them, or which ſurround them, there is no part of matter which has not an internal energy which is proper to it; but it is thus determined by the parts which are near it, according as their particular determination is ſtronger or weaker, gives way or reſiſts. Theſe parts in their turn continue to be varied in another manner by the moſt near; and it is in this manner that all beings continue to change without ceaſing, by a movement which I hold to be perpetual. But as all the world agree that all the local movements which can be imagined, are accidents, which increaſe themſelves, alter themſelves, diminiſh and annihilate themſelves, without, notwithſtanding the ſubject which they modify, or in which they exiſt, it's deſtroying itſelf, *this ſubject* cannot be entirely imaginary, a notion purely abſtract; it muſt be ſomething poſitive and real. Extenſion cannot be this ſubject, inaſmuch as the ideas of variety, of alteration, or of movement, do not neceſſarily flow from the idea of extenſion; therefore, as I have juſt ſaid, it muſt be action, ſeeing that all theſe movements are but different modifications of action, in like manner as all the particular bodies or quantities are but different modifications of extenſion. I ſhall ſpeak in it's place of ſolidity or impenetrability, and I ſhall ſhew the manner in which theſe three eſſential attributes, or theſe three properties, are inſeparable and co-operate.

But let us not forget that an appeal has been made to our ſenſes. The vulgar believe that the ſtars are not bigger than common lamps, that the ſun and the moon have but about a foot diameter. It is our reaſon that has enabled us to calculate the diſtance which is between our eyes and theſe bodies, and to meaſure their real maſs by the manner in which they ſhew themſelves to us at ſuch a diſtance. Is it not alſo reaſon which teaches us to diſtinguiſh the fixed ſtars from the planets, and which enables us to conceive the movements of theſe latter, which are very different from what our ſenſes ſhew us? I ſpeak not of a ſtraight ſtick which appears crooked in the water, nor of the colours which we ſee upon the neck of a pigeon; neither do I ſpeak of heat and cold, of the ſavours and of the odours, which exiſt not in the things themſelves which we denominate from theſe ſenſations. I adhere to the ſubject on which I treat. Is not local movement often ſo ſlow, that our ſenſes cannot perceive it? We do not ſee a body paſs ſucceſſively from one place into another, though it does not ceaſe to move itſelf, and though we be in the end convinced of it by indubitable effects, and by the viſible intervals which it leaves. Have we not examples of this kind in the pointer of a watch, in the ſhade of a ſun dial, &c.? It is the ſame in movements which are very rapid, in which we do not ſee diſtinctly the ſucceſſions, as in the paſſage of a muſquet-ball, &c.

If we were to judge of the body of a man or of any other animal by it's exterior ſurface, it would appear not to have any more local internal movement, than lead, gold, or a ſtone. We ſhould not form a more ſenſible judgment of a tree or of a plant; however, if all the parts of a tree were not in movement, it would neither grow nor decline. The knowledge which we have in anatomy, joined to daily experience, permit us not to doubt but that all the parts of animals are in a continual movement, as well as thoſe of plants; they increaſe, they decreaſe, they tranſpire, they diſſolve themſelves, they grow fat or lean; they heat or cool themſelves even when the man or the animal is in a ſtate of repoſe or ſleep, or though the tree never goes out of it's place. No one at this day is ignorant of the circulation of the blood, or of the ſap. Iron, ſtone, gold, and lead are not more deſtitute of an internal movement, than the bodies which we call fluids; without *that* they would not undergo the changes which air, fire and water make them experience. But although theſe bodies have iſſued from a precedent ſtate to take theſe forms which we ſee them in at preſent; though the changes which they experience in their figure clearly ſhew that their parts are in a continual movement, yet the cauſes which ſurround them do not make them change form or ſituation in a manner ſufficiently marked to ſhew itſelf to our ſenſes. It is this which has cauſed many people to believe that theſe bodies had no movement, nor any particular determination.

Nevertheless theſe bodies, in remaining in one ſame place, experience a real action, the efforts and the reſiſtance of one of their parts being equal, during a certain time, to the determining movements of the adjoining bodies which act upon them, and which prevent them from getting beyond certain boundaries. This is eaſy to conceive, if we call to mind that which I have ſaid already concerning the ſucceſſive and innumerable determinations of movement, of which this is a kind which we have called repoſe, in order to diſtinguiſh this ſtate of the body, from *that* when it is in local and viſible movement.

A BODY which deſcends, or which falls by gravity, or by the ſtronger impulſe which is impreſſed upon it by other bodies, having more force than the bodies which give way to it in it's courſe, is not the leſs in action when it is ſtopped; it is only prevented from advancing further by the more powerful reſiſtance which the earth oppoſes to it; it cannot tread back it's ſteps by reaſon of the equal preſſure of the bodies which are behind it. A ſhip is not without action when the ſtrength of the wind which impels it towards the mouth of a river, is equal to the ſtrength of the tide which remounts or which puſhes it towards the ſource of the river: for, if one of theſe forces gets the better of the other, the veſſel will move on: but during the ſtruggle, the veſſel has only been deprived of a particular ſort of movement, and not of all effort or action. Iron, lead, or gold are no more deprived of action; the changes which they undergo, whether by their internal movements, or on the part of the movements of the ſurrounding bodies, of which the effect is to wear them, to diſſolve them, to tarniſh them, to diminiſh them, to alter their forms, &c, ought to convince us of this truth.

Thus, ſince repoſe is but a certain determination of the movement of bodies, a real action of reſiſtance between two equal motions, it is evident that *that* which is called repoſe, is but a relative ſtate, regard being had to other bodies which ſenſibly change place.

But the vulgar taking local movement for a real being, as they do all other relations, have looked upon repoſe as a privation, or rather have believed that movement was active, and that repoſe was paſſive, relatively to the body which has given it it's laſt determination; juſt as it is active relatively to the body which it determines afterwards. It is in taking from theſe words a relative ſignification, and giving to them an abſolute one, that an opening has been given to the moſt part of the errors and diſputes which have ariſen upon this ſubject.

However, the moſt ſkilful mathematicians and the greateſt philoſophers, though they ſuppoſed movement extraneous or foreign, and repoſe eſſential to matter, have fairly acknowledged the actual conſtant motion of all it's parts; this they have been forced to by the irreſiſtible power of experience and reaſon. They agree that the bodies ſhut up in the boſom of the earth experience movements and continual changes, as well as thoſe which we ſee on it's ſurface; this is proved to us not only by the nature of the ſeveral beds of earth in mines and quarries, by the generation of metals and minerals, but alſo by the appearances of all other ſubterranean bodies and foſſils. They confeſs that it is by movement that we muſt explain all the phenomena of Nature; that it is by the reciprocal action of bodies one upon on another, according to mechanick principles. Thus it is that they account to us for all the varieties with which Nature preſents us; thus they explain to us the ſenſible and primitive qualities, the forms, the combinations, the modifications, the changes of matter. Thoſe, therefore, who have formed to themſelves the moſt accurate ideas of local movement, conſider the points from whence a body departs and towards which it tends, not as in an abſolute repoſe, but only as in a ſtate of repoſe relatively to the movement of that ſame body. Though the great *Newton* be looked upon as the partizan of an extended incorporeal ſpace, he omits not to ſay, that perhaps there is not one ſingle body which is in an abſolute repoſe, that perhaps there is no immoveable corporeal center to be found in Nature. This is the manner in which in one place he expreſſes himſelf:—"The vulgar attribute reſiſtance to "bodies in repoſe, and impulſion to "bodies moving; but movement and "repoſe, in the manner in which they "are generally conceived, are but re-"latively diſtinguiſhed from one an-"other; and the beings which are vul-"garly believed to be in repoſe, are "not really ſo." (Vide Mathematical Principles, p. 7.) Thus it is that this man, ſo juſtly admired, expreſſes himſelf; a man who has carried his views further than any other, into Nature, or into the actual ſtate of matter: indeed the whole of natural philoſophy is comprized under the title which he has given to the firſt Book of his Principles, which he has intituled, "Of the "Movement of Bodies."

I THINK I may boldly conclude, from the whole which precedes, that action is of the eſſence of matter, inaſmuch as it is this action which is the real ſubject of all the modifications which are deſigned under the names of local movements, of changes, of differences, and of varieties; and more eſpecially, becauſe that the abſolute repoſe, upon which men have founded the inertium or inactivity of matter, is ſhewn to be a pure chimera.

THIS vulgar error, which has occaſioned the ſuppoſition of an abſolute repoſe, has been occaſioned by the appearances which bodies heavy, hard, and in maſs, preſent: and ſeeing that theſe bodies did not change direction, but that, in order to make them change it, ſtronger determinations or forces were neceſſary, the effects of which were obvious to the ſenſes, men have concluded, 1°. That there was an abſolute repoſe; 2°. That all bodies would continue in a ſtate of repoſe without an exterior mover, which they have not looked upon as material, ſeeing that all bodies were matter, and that *that* which was neceſſary to the parts, muſt alſo be neceſſary to the whole. At leaſt, philoſophers have drawn theſe inductions from the notion which they have imbibed from their infancy concerning repoſe, and in conſulting their ſenſes only: for no man is born a theologiſt, a philoſopher, or a politician; therefore, at the outſet, every man is upon a level with the vulgar, and receives the ſame impreſſions, or the ſame prejudices; and although a man ſhould happen to diſembarraſs himſelf from a great number of errors, yet if he admits into his mind any principle which he has not examined, how enlightened ſoever he may be in other reſpects, he will finiſh by falling into abſurdities without number, which will flow from this principle admitted without examination.

Since, then, there is no abſolute repoſe in the examples which have been given, but that, on the contrary, all the parts of matter are ſhewn to be in an abſolute movement, we ought not to range ourſelves on the ſide of thoſe among the philoſophers who are the moſt ſuperſtitious, and the leaſt perſpicacious. We ought not in our reaſonings to take our departure from a vulgar error; but in ſeeing that every part of matter is always in movement, we ought on that account to conclude that movement is eſſential to the whole; for the ſame reaſon that we admit extenſion to be ſo, becauſe that every part of matter is extended. Theſe two caſes are ſimilar, and reaſon will prove it to thoſe who ſhall have renounced their prejudices.

I HAVE hitherto intentionally omitted to ſpeak of the relative movements of all thoſe bodies which are ſuppoſed to be in repoſe, and I ſhall but ſlightly take notice of them here, in order to recall to mind, at the ſame time, that theſe movements do not ceaſe to be abſolute. All the beings which exiſt upon our terreſtrial globe participate in it's continual movement. It is the ſame in reſpect to thoſe which are in the other planets, ſeeing that the movement of the whole is but the ſum total of the movement of the parts. This is ſelf-evident, and demonſtrates itſelf further by the proportional force which is neceſſary, either to impreſs a new direction or determination on a body, or to ſtop the direction which it has already received; for the one cannot be leſs than the other. Though all the parts imaginable of a ball in motion be in repoſe, the one relatively to the others, or relatively to the place which they occupy in the ball, yet no one will ſay that they are not all really in motion, not only as parts of the ball, but alſo as relatively to the bodies which are out of it. It is thus that a paſſenger partakes in the movement of a ſhip under ſail, to ſay nothing of the ſpecifick movements of his human ſyſtem; though this paſſenger is conceived to be in repoſe, relatively to the place where he ſits, or to the other parts of the veſſel, which, notwithſtanding the movement of the whole, keep the ſame diſtance and poſition in reſpect to him.

I HAVE likewiſe only as yet ſaid one curſory word concerning the centripete force, ſorce, by virtue of which all the bodies of the earth tend towards it's center, in like manner as all other bodies tend towards the center of their particular movements; nor have I ſaid one word concerning the centrifuge force, by which bodies ſtrive to recede from the center in a right line, if they are not otherwiſe determined by a ſtronger cauſe. It is thus that a ſtone whirled about in a ſling, is retained in it's orbit by the thong of the ſling, the ſtrings of which being ſtretched by the motion of the ſtone, are contracted or drawn cloſer towards the ſtone itſelf, by the efforts which it makes to eſcape in a direct line in every point of the circle which it deſcribes: whilſt theſe ſtrings are at the ſame time equally ſtretched and contracted towards the hand of the man; from whence it follows, that the center approaches as much to the ſtone, as the ſtone approaches to the centre, which yet for many reaſons does not always happen. Very remarkable effects depend upon theſe forces, in proportion as they are more near being equal, or in proportion as the one is more ſtrong than the other; wherefore, the centripetal force being much more ſtrong than the centrifugal force of the parts of the earth, including likewiſe it's atmoſphere, we ſee the main reaſon which prevents it from loſing any of it's matter, and why it remains always of the ſame volume, or of the ſame dimenſions; the centripetal force of gravity, which retains the different bodies in their orbits, being much more ſtrong than the centrifugal force of motion by which they endeavour to eſcape in the tangent.

WHATEVER may be the cauſes of theſe forces, they furniſh inconteſtable proofs of the continual movement which I maintain to exiſt in all beings. But I ſhall ſay nothing more on this head for fear of engaging myſelf in a diſpute on the nature of gravity, and of being obliged to inquire if the heavineſs of bodies be always proportional to the quantity of matter which they contain; that is to ſay, if there be more matter, as there is more weight, in a cubick foot of lead, than in a cubick foot of cork, (a ſentiment which I know very learned philoſophers maintain;) or if the ſame quantity of matter be contained in the ſame dimenſions of mercury, of gold, of ſilver, of iron, of lead, of earth, of water, of air, though their ſpecifick weights be ſo different:—which difference ariſes in part from the exterior preſſures, and in part from the interior ſtructures or modifications which give to their common matters the different forms which conſtitute their ſpecies, and which diſtinguiſh them in their weights, as they are diſtinguiſhed in their figures, their colours, their ſavours, their odours, or their other qualities, ariſing from their particular diſpoſitions, the action of other bodies, or from our own imagination and ſenſes. At leaſt this is my opinion, be my reaſons for it what they may: add to which, that were gravity an attribute eſſential to matter, and not a particular mode, the ſame things would be equally heavy in all places, and in all circumſtances, in like manner as they are every where equally ſolid and extended; they would not vary in the acceleration or retardation of their fall, according as the diſtances ſhould vary from the center.

Thus, according to me, gravity does not prove the exiſtence of a vacuum, it is but one of the numerous modes of action, in whatſoever manner this determination happens, which we ſhall not examine for the preſent; it's real exiſtence being denied by no one, and the quantities and proportions of movement proceeding from gravity, or the mutual action of particular bodies in this reſpect, being to be calculated from facts and obſervations, be their phyſical cauſes what they may. For the ſame reaſon I ſhall not ſpeak of the attraction of the planets, of their gravitation, of their manner of acting one upon another, ſeeing that it is certain from the influence of the ſun, the flux and reflux of the ſeas occaſioned by the moon, and from many other proofs, that the planets affect one another very ſenſibly in proportion to their maſs, to their figure, to their diſtances, and to their poſitions.

The opinions of thoſe who perſuade themſelves that movement is adventitious to matter, that it has parts actually independent and ſeparate, that there exiſts a vacuum or incorporeal ſpace, are not the only errors to which the notion of an abſolute repoſe has given birth: for the leaſt ſuperſtitious of philoſophers, and thoſe who have the moſt attentively conſidered the nature of things, have taught that all matter was animated, and that the particles of air, of water, of wood, of iron, and of ſtone, enjoyed life like men, and animals, or like the maſs entire. They were naturally conducted to this idea, inaſmuch as they had learnt from others that matter was eſſentially inert, (a prejudice from which they had not taken care to diſengage themſelves) and yet finding, from experience, that matter, as well as all it's parts, was in a continual movement, and believing likewiſe that life was a thing different from the organized body, they concluded that the cauſe of this movement was ſome being in intimate union with matter, in whatſoever manner it was modified, and that it was inſeparable from it. Theſe vivifying philoſophers are divided into different claſſes; for a great number of expedients are neceſſary to give to error the appearance of truth. Some of them, amongſt whom we muſt place the *Stoicks*, looked upon life as the ſoul of the univerſe, co-extended with matter, diffuſed throughout the whole, and penetrating all it's parts, as eſſentially corporeal, though infinitely more fine than all the other bodies, which they ſuppoſed very groſs in compariſon to it.

But the univerſal ſoul of the *Platoniſts* was immaterial, or but a pure ſpirit.

rit. Others, amongſt whom are *Strato* of *Lampſacus*, and the modern *Hylozoiſts*, have taught that the particles of matter had life, and conſequently thought, to a certain degree, or a direct perception without any reflexion. To which, *Heraclitus* among the antients, and *Spinoſa* among the moderns, have added intelligence or reflex acts, without ever embarraſſing themſelves in removing the difficulties which preſented themſelves againſt ſo precarious an hypotheſis, and without even giving themſelves the trouble to ſhew how, even in granting this conſcience to matter, the different reaſoning particles could agree to form the ſame body or ſyſtem of beings, or to ſeparate or join themſelves together ſo regularly on certain occaſions, without having any diſpute amongſt themſelves concerning the beſt or the worſt places, or about the company with which they ſhould aſſociate; or how, though all the particles of a man have ſenſe and underſtanding, he finds but one ſuch faculty in himſelf, and that faculty exerting it's operations only in one place.

The idea of the *plaſtick* life adopted by other philoſophers, is not leſs romantick. According to Doctor *Cudworth*, who cauſed it to revive, it is not material; it is a kind of ſpirit of an inferior order, deſtitute of ſenſation and of thought, but which, notwithſtanding, is endued with an energy, which makes it fulfil the functions of life. Theſe partizans of *plaſtick* forms ſeem to differ from the *Hylozoiſts* only in words, though they pretend themſelves to be in very oppoſite ſentiments; which they do, without doubt, through the fear of the abſurd or odious conſequences which might be drawn from their opinions. It is with them the ſame as with the *Janſeniſts* and *Calviniſts*, who, though certainly of the ſame opinion upon the dogma of predeſtination, (notwithſtanding their ſubtle diſtinctions) do not fail reciprocally to blame each other.

But all theſe hypotheſes are viſibly ſtratagems, or trials of ſkill, which men have made uſe of to explain the actual movement of inert matter, in order to avoid making the Divinity intervene at each inſtant, and not to make *it* the author indiſtinctly of all actions, in ſubmitting *it* to an abſolute and inevitable neceſſity.

This is what I had to ſay to thoſe who have had recourſe to foreign movers in order to put matter in motion. As to thoſe who have looked upon it as inert and deſtitute of action in it's nature, and who have aſſigned no cauſe of it's movement, as *Anaximenes* and other antient philoſophers; and thoſe who, as *Spinoſa* among the moderns, have not aſſigned the cauſe either of thought, or of movement in matter; their opinions are ſo unphiloſophical and devoid of reaſon, that it is unneceſſary to expoſe them, and *they* have always been a ſubject of triumph to the *Stoicks*, the *Spiritualiſts*, the partizans of *plaſtick* forms, &c.

But the moſt univerſal error which has been produced by the falſe ſuppoſition of the inertium of matter, is *that* which attempts to perſuade us that there exiſts a ſpace infinite, extended, and neverthelesſs incorporeal. As very great ſyſtems have been founded upon this actual ſpace, which have had for their defenders men very celebrated and of acknowledged merit, I proceed to give the hiſtory of this opinion, as I have done *that* of the others; though I might diſpenſe with ſo doing, more eſpecially after having proved that matter is eſſentially active, and that it's general movement is the immediate ſubject of all the motive determinations, in like manner as extenſion is the immediate ſubject of all forms and quantities. In reality, it was again principally to explain the production of movement in matter, that they imagined this ſpace as the place of it's action; but matter not being inactive, and having no need that movement ſhould be continually imparted to it by an exterior agent, we may baniſh ſpace from philoſophy, as an uſeleſs and chimerical thing. All the world agrees that extenſion is infinite, ſeeing that it cannot be bounded by extenſion; the demonſtrations of this principle are too univerſally acknowledged and adopted, for me to have occaſion to repeat them. Matter is not leſs infinite when we conceive it as an extended ſubſtance; for no limits can be imagined to which one may not again add extenſion *ad infinitum*; thus, if it is not infinite, it's quality of being finite muſt come from ſome other cauſe than it's extenſion.

THOSE who upon philoſophical principles have maintained that matter was finite, have imagined to themſelves that it was inactive, diviſible into parts ſeparate and independent of one another, between which there were vacant interſtices; they have thought that theſe parts were heavy or light in themſelves; that they had diverſe figures,

gures, and various degrees of movement, when they had once been forced to depart from their natural ſtate of repoſe. *This* neceſſarily conducted them to ſuppoſe finite extenſions, at the ſame time that they admitted another infinite extenſion. Then they could not diſpenſe with making theſe extenſions different in other reſpects; the one was immoveable, penetrable, indiviſible, invariable, homogeneous, incorporeal, and containing every thing; the other was moveable, impenetrable, diviſible, variable, heterogeneous, corporeal, and contained; the one denoted infinite ſpace, and the other particular bodies.

BUT all this diſtinction is founded upon the ſuppoſition of the thing in queſtion, and upon the equivocal ſignifications of the words, *place*, *whole*, *parts*, *particles*, *diviſibility*, &c. Thus, having looked upon it as certain that matter was finite, divided into parts, that it ſtood in need of receiving movement from elſewhere, that it acted in a void ſpace, theſe philoſophers have made this wheel within a wheel, or have ſuppoſed one extenſion penetrating another extenſion, as if modes could be penetrated by their ſubject.

But all theſe ſuppoſitions being only, as I have ſaid, conſequences of the general ſuppoſition, that matter was deſtitute of action, and the contrary of this, or the eſſential motion of it being already demonſtrated, there is no reaſon to believe but that matter is infinite, and that as non-entity has no property, extenſion which all the world agree to acknowledge as infinite, is ſuited to this ſubject, which is itſelf infinite, and which is modified to infinity by it's movement, it's extenſion, and it's other inſeparable attributes.

I MIGHT ſtop here; but in order to place this matter in it's fulleſt point of view, and to put it out of all diſpute, I proceed to ſhew that all which has been attributed to ſpace and to bodies as their eſſential differences, belongs indubitably to infinite matter. For I acknowledge that theſe properties have a real exiſtence; and though they be in appearance oppoſite, they are only the affections of the ſame ſubject conſidered under different points of view. When we conſider bodies as finite, moveable, and diviſible, in repoſe, heavy or light, of different forms, and in various ſituations, then we ſeparate by abſtraction the modifications from the ſubject, or, if you will, we ſeparate the parts from the whole, and we imagine proper limits to certain portions of matter which ſeparate them and diſtinguiſh them from all the reſt; from thence it is that the notion of a vacuum has originally come: but when we conſider the infinite ſpace as impenetrable, immoveable, indiviſible, as the place which receives all bodies, where they are contained and move themſelves, whilſt *it* is itſelf deprived of form, and exempt from change, then, on the contrary, we ſeparate by abſtraction the infinite ſubject from finite modifications, that is to ſay, the whole from it's parts.

Let us now apply this doctrine to particular examples. Inaſmuch as nothing can either be added to, or cut off from infinity, the univerſe can neither be augmented nor diminiſhed, ſeeing that there exiſts not any place out of itſelf to which you could remove *that* which you ſhould have cut off, nor from which you could bring that which you would add; conſequently it is immoveable and indiviſible: it is alſo without figure, ſince it has no limits; and it is immenſe, ſince no infinite quantity, how often ſoever repeated, can equal or meaſure it's extenſion. Therefore, when we ſay that ſpace contains every thing, we mean it of matter infinite, in order to diſtinguiſh the whole from the parts, which nevertheleſs do not really differ from the whole; when we ſay that ſpace pervades every thing, we ſeparate by abſtraction the extenſion of matter from it's other properties; and we do the ſame thing when we ſay that ſpace is incorporeal, ſeeing that then we only conſider it as geometricians conſider points, lines, and ſurfaces. When we ſay that it is one, we wiſh to be underſtood that it is infinite and indiviſible; for there is but one ſingle univerſe, though there be worlds without number. When we ſay that it is the place of all things, we indicate that it is the ſubject of it's proper modifications, of it's proper movements, of it's proper figures, &c. When we ſay that it is homogeneous, we wiſh to announce that matter is always the ſame, how various ſoever may be it's modifications. Laſtly, when we ſay that finite bodies cannot exiſt without an infinite ſpace, we mean thereby their relative exiſtence, and only ſay that they cannot be unleſs they are; ſeeing that their proper ſolidity, or their manner of being relatively to other beings, is that which we call their place, abſtraction made of the univerſe of which they are parts, and of which they divide, in a finite and limited manner, the movement, the ſolidity, and the infinite extent; for infinite matter is the ſpace and real place, as well as the real ſubject of it's proper modifications, and of it's portions.

What I have here ſaid may make us perceive from whence men have formed the notion of an abſolute ſpace. It has ariſen in part from gratuitous ſuppoſitions, ſuch as that matter is finite, that it is inert, and that it may be divided; and in part, from their having made abſtraction of extenſion, which is the moſt ſtriking property of matter, without paying attention to it's other properties, or to their abſolute connexion in the ſame ſubject, though each of them might be abſtracted mentally from the others; a thing, which is on many occaſions of very great uſe to the geometricians: but we ought never to take abſtractions for realities, nor make them exiſt out of the ſubject from which we have mentally ſeparated them, nor place them in another ſubject uncertain or unknown. Matter is often conſidered, abſtraction made of movement; in like manner as movement is often conſidered, abſtraction made of matter; and extenſion, abſtraction made of movement, of ſolidity, &c. Each of theſe properties may be conſidered ſeparately from the others; though, in reality, the movement of matter depends upon it's ſolidity and upon it's extenſion, and though theſe attributes be inſeparable from one another. But thoſe who maintain the exiſtence of an abſolute ſpace, after having conſidered matter, abſtraction made of extenſion, have diſtinguiſhed the general extenſion from the particular extenſion of the matter of ſuch or ſuch a body, as if the latter was ſomething ſuperadded to the former; though they could not aſſign the ſubject of the firſt extenſion, nor ſay whether it was a ſubſtance which was neither body nor ſpirit, or a new ſpecies of non-entity, endowed notwithſtanding with the properties of a being.

Moreover, many among them have been deſirous of making it paſs for the Supreme Being itſelf, or at leaſt for an incompleat idea of the Divinity, as may be ſeen in the treatiſe upon real Space, by Mr. *Ralphſon*; though it may be found, from the authorities which he quotes, that he is not the firſt inventor of this notion, nor the only one who maintains it at this day. I have no doubt but that the moſt part of theſe gentlemen have firmly believed the exiſtence of a Deity; but it ſeems to me, that by force of ſubtilizing, they have reduced Him to a mere nothing, or, at leaſt, that they have made the univerſe, or nature, the only God, which is what aſſuredly they would not agree to: but the goodneſs of their intentions ought to exculpate them in the eyes of candid and equitable men, and prevent their being harraſſed with the charge and conſequences of atheiſm. However, their error has been perceived by the *Atheiſts* themſelves, and ſome of them have made a joke of it, as may be ſeen in theſe four verſes of a poem, where after having cavilled upon certain other notions of the Divinity, they turn into ridicule, with much more reaſon, this infinite incorporeal ſpace*. "Others, it is there ſaid, whoſe "heads are full of more ſublime no-

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* "Others, whoſe heads ſublimer notions trace,
"Cunningly prove that thou'rt Almighty Space;
"And Space we're ſure is nothing, ergo Thou:
"Theſe men ſlip into truth they know not how."

" tions, prove with much addreſs that
" all ſpace is nothing—then it is the
" ſame with thee."

THESE men, without thinking of it, have hit upon the truth: for the idea of one extenſion penetrating another extenſion has appeared ridiculous to many people who were in other reſpects very far from *Atheiſm*, or irreligion; and who would be glad to learn where the intelligence, the reaſon, the wiſdom of an extended ſpace could reſide, whether in the whole or any one of it's parts. When I ſpeak of parts, it is to accommodate myſelf to ordinary ideas; for the Infinite can have no parts; but if, like one of the ſpeakers in the Dialogues of *Cicero*, we ſhould pretend that the *Whole* has underſtanding, becauſe ſome of it's parts are intelligent; beſides, that we could not grant that the intelligence of theſe parts belonged in any manner to their extenſion, we might alſo retort with the other ſpeaker in *Cicero*, that by the ſame reaſon, the whole muſt be a courtier, a muſician, a dancing-maſter, or a philoſopher, ſeeing that many of it's parts are ſo. But theſe are ſophiſms both on the one ſide and on the other, inaſmuch as it is confounding variable modes with eſſential properties, or true effects with imaginary cauſes, foreign or little proportioned to theſe effects.

After having ſeen that movement is eſſential to matter, we ſhall find that the arguments of thoſe who maintain the exiſtence of abſolute ſpace, are rather compariſons and ſimilitudes, than reaſonings, and prove no more than that you conceive what they mean, or elſe that in general they beg the queſtion.

tion. I can ſuppoſe with them, that God has divided all the matter of the univerſe into two equal ſpheres; that if they are at a certain diſtance the one from the other, there will be between them a ſpace or a void which one may meaſure, or that if they touch in one ſingle point, as perfect ſpheres neceſſarily muſt do, there will be a ſpace which will not be body between the other points of their circumference. But is not all this, at the ſame time, to ſuppoſe matter finite, to ſuppoſe this very ſpace which they pretend to prove, and that for no other reaſon that I can perceive, ſave the ſimple conſideration of gravity. I can with *Locke* well conceive the movement of one ſingle body without another's immediately ſucceeding to take it's place; but this muſt be in making abſtraction of this ſingle body, or in preventing my attention from fixing itſelf upon thoſe which really ſucceed it. I can with him conceive two bodies placed at a certain diſtance, which approach each other without diſplacing any other body until they come to meet each other; but this muſt be in making abſtraction of all *that* which they ſhall actually diſplace: for, as *Locke* himſelf very well obſerves, it does not follow that becauſe we conceive a thing may be ſo, it exiſts actually in that ſtate; otherwiſe we might fill the world with chimeras, with centaurs, with monſters which have never exiſted. But I grant it to him, that by theſe ſort of examples, I comprehend very well the idea of thoſe who maintain the exiſtence of ſpace or void, and that it was abſurd in the *Carteſiens* to deny, as well as unpardonable in them to diſpute againſt, a thing which they confeſs to have had no idea of.

LOCKE has ſaid all that can be ſaid upon this ſubject in his *Eſſay on the Human Underſtanding*, more eſpecially in the 13th chapter of the 2d Book, where, amongſt other things, he thus expreſſes himſelf: "If the body be not "ſuppoſed infinite, which I believe no "one will affirm it to be, I can con- "ceive a man placed at the extremi- "ty of matter who ſhall ſtretch out his "hand beyond his body."—This philoſopher ſurely could not be ignorant that many people, before he was born, had maintained the infinity of matter, and that there were more than one who maintained it in his time. But though I might conceive by abſtraction theſe imaginary limits, yet I can conceive no good reaſon to perſuade myſelf that extenſion, which *Locke* acknowledges to be infinite, can exiſt any where out of matter. I ſay, that very far from finding in all that has been wrote upon this ſubject any concluſive reaſoning, I only find therein ſuppoſitions which I have already confuted; to ſay nothing of the inſurmountable difficulties which would reſult from theſe fictitious extremities when the queſtion ſhould be to examine their conſiſtence and figure, and whether any thing could detach itſelf from them,—what muſt become of theſe fractions or detached parts, and an infinity of other inexplicable problems.

I MIGHT alſo, in deference to Mr. *Locke*, enter upon the conſideration of divided particles; but I deny that the continuity of infinite matter can ever be broken or ſeparated by any diſtinct ſurfaces with void intermediate ſpaces; for, as I have already ſaid, we only make abſtraction of that which we call parts, in conſidering by itſelf ſo much of extenſion as is neceſſary to our object, and in diſtinguiſhing theſe parts, not by real diviſions of the whole, but by the modifications of colour, of form, of movement, &c, in like manner as we conſider the heat of the ſun without paying attention to it's light.

Mr. Locke alſo ſays, that thoſe who affirm the impoſſibility of the exiſtence of ſpace without matter, are not only forced to make bodies infinite, but muſt alſo deny that the Supreme Intelligence has the power to annihilate any part of matter. It is certain that they make matter infinite; but they deny what he adds concerning the annihilation of it's parts; for, beſides that it cannot be ſhewn that the Supreme Intelligence has ever revealed that *It* would annihilate any part of matter, it would no more be an argument for a real ſpace, to ſay that the Supreme Intelligence has the power of annihilating the portions of matter, than it would to pretend that the world will finiſh in three days, becauſe it may be conceived poſſible for the Supreme Being to deſtroy it in ſo ſhort a time.

I do not ſee neither, why Mr. *Locke* ſays in the ſame place that thoſe who maintain the infinity of matter, ought to keep their opinions to themſelves: I do not know what ought to make them more reſerved than thoſe who maintain the exiſtence of an infinite ſpace, or any other infinite; for this word is applicable to many ſubjects. That which prevented *Deſcartes* from affirming plainly that matter was infinite, and determined him to content himſelf with calling it *indefinite*, was, that he was on the one hand aſſured that extenſion was infinite, whilſt on the other he ſaid that matter was inert in itſelf, and really diviſible; which cauſed that he could not demonſtrate it's infinity; though one may very clearly prove by his writings that he has poſitively affirmed it.

As to the difficulties which the *Theologiſts* oppoſe againſt this principle, they are of very little weight, and ſhew that there are men who have very little philoſophy with a great deal of zeal and warmth. For my part, I do not believe that the moderate *Theologiſts* of our age, have any deſire to revive the futile and exploded ſophiſms of their ignorant predeceſſors: but I beg it may be remembered, that although I am not of the ſame opinion with Mr. *Locke* concerning ſpace, yet that I hold in the greateſt eſtimation his excellent work upon *the human underſtanding*, and that I judge it to be the moſt proper to guide the reaſon in a manner exact, ſuitable, and intelligible, upon all ſorts of ſubjects. It is not through affectation that I here declare myſelf of a contrary opinion to this great man; but knowing the reſpect that is juſtly due to his authority, I have thought it my duty to remove the prejudices which *it* might give birth to againſt the infinity of matter, againſt movement which is in it's eſſence, or againſt all the inductions which may be drawn from theſe principles.

I PRESUME then to flatter myſelf, that from the whole of what precedes, it will be allowed, that movement ought to enter into the definition of matter, as well as extenſion and ſolidity. If I am aſked the definition of movement itſelf, I ſhall ſay, that neither I nor any one elſe can give it. Not that we know it the leſs on that account; on the contrary, we know it much better than we do many things which may be defined. Simple ideas, ſuch as thoſe of movement, of extenſion, of colour, of ſound, &c, are ſelf-evident, though we cannot define them; but the words which deſign complex ideas, that is to ſay, an aſſemblage of evident ideas conſidered as one ſingle thing, are the true objects of definition; becauſe that the different terms which repreſent theſe ideas, when they are united together, ſhew the connexion, the poſſibility, and the conception of the whole. It is thus that all the words in the univerſe could not explain what *blue* is, nor give a clear idea of it to him who ſhould never have ſeen this colour. If we ſuppoſe that the ſame perſon ſhould never have ſeen gold, but that he very well knows other metals, he would be enabled to form to himſelf a diſtinct idea of it, when he ſhould be told that it was a metal yellow, heavy, malleable, fuſible, fixt, and the like. Thus, when we define words which deſign ſimple ideas, we muſt not take theſe words for the ſubjects of theſe ideas; for ſynonimous terms do not explain the nature of a thing; they only explain to us the meaning of the word in a more intelligible manner; thus it is that the terms of paſſage, of tranſlation, of ſucceſſive application, are only different words to deſign movement, and are no more definitions of it, than that of *Ariſtotle*, who ſays, that "it is "the action of a being which has the "power of advancing itſelf ſo far as it "has that power." But all particular local movements may be defined by the lines which they deſcribe, and by the cauſes which determine the courſe or the degrees of theſe movements.

The ſame thing may be ſaid of the general extenſion of matter, and of it's particular determinations, by meaſure, figures, &c. The ſolidity of matter is in like manner an intuitive or indefinable idea; but I do not here take ſolidity in the ſenſe of geometricians, I do not mean by it all quantity aſſigned to three dimenſions; but I take it in the ſenſe of Mr. *Locke*, who has ſubſtituted the poſitive term of *ſolidity* to the negative term of *impenetrability*, to deſign the reſiſtance which we find in each body when it prevents another body from putting itſelf in the place which *it* occupies before *it* has abandoned it. It is thus that a drop of water equally preſſed on all ſides is an inſurmountable obſtacle to the union of the ſtrongeſt bodies in the univerſe, ſo long as it's parts are not removed; it is thus that a piece of wood will prevent your two hands from joining, whatſoever effort you make to that end. The ſame thing is alſo as true of all ſoft and fluid bodies, as it is of the moſt hard and moſt fixed bodies, or of the moſt heavy and moſt light bodies; it is equally true in reſpect to the air as it is in reſpect to gold and diamonds, as is very well obſerved by Mr. *Locke*, in whom there is ſo much exactneſs throughout; who diſtinguiſhes the word employed to deſign an inſeparable property of matter, from it's common acceptation, when we make uſe of the word ſolid inſtead of the word hard, in which ſenſe it means the coheſion of the parts of all bodies difficult to ſeparate; whereas, in it's philoſophical ſenſe, it is a repletion

tion or a total excluſion of all other bodies; and this is the ſenſe which I attach to it throughout all this work.

I DO not pretend to ſay that matter has no other eſſential properties, ſave thoſe of extenſion, ſolidity, and action; but I am perſuaded, that if we pay due attention to theſe three properties, we ſhall be able to explain an infinity of it's phenomena, in a manner much more clear, than has hitherto been done. But a very few diſcoveries muſt only be expected to be made in phyſicks, by thoſe who chuſe to make abſtraction of one of theſe properties, or of *that* which alone can compleat the eſſence of matter; for it is certain that in matter theſe attributes can only be ſeparated mentally.

I DENY, for example, that extenſion exhauſts the idea of matter, inaſmuch as it does not imply ſolidity and movement; it may be very true, that every thing extended is matter, though matter be not barely extended, but alſo active and ſolid. But though, in the pure conſideration of theſe ideas, the one does not ſuppoſe the others, and though each of them has certain modes which we conceive to belong to itſelf excluſively and immediately; yet they are ſo firmly connected in nature that the one cannot exiſt without the other, and that they all neceſſarily muſt concur in the production of theſe modes which are proper to each of them.

EXTENSION is the immediate ſubject of all the diviſions, the figures, and the portions of matter; but it is it's action which produces theſe changes, and they could not be diſtinguiſhed without ſolidity. Action is the immediate cauſe of all local movements, of all the changes, and of all the varieties which we ſee in matter; but extenſion is the ſubject and the meaſure of their diſtances; and though it is upon ſolidity that the reſiſtance, the impulſion, and the protruſion of bodies depend, yet it is action which produces them in extenſion.

Thus ſolidity, extenſion, and action are three diſtinct ideas, without being three different things; they are the different manners of viewing the ſame ſubject.

But to return to the particular ſubject of which we treat; we ſhall eaſily perceive that the true moving force is this action eſſential to matter, and that the force impreſſed upon particular bodies, is ſome determination or direction of the general action; for in this ſenſe it is indubitable that nothing can move, that is to ſay, determine itſelf, until it be determined by ſome other being: thus, matter being active, the direction given to this action, in whatſoever part it may be, would always continue of itſelf, ſince there can be no effects without a cauſe, conſequently this direction muſt be changed by a ſuperior force, and *that* by another, and ſo on; the one only ceaſing to act when another begins, in like manner as one form is never deſtroyed in matter but to give place to another. Thus each movement is always ſucceeded by another movement, and never by an abſolute repoſe, any more than in each part of matter the ceſſation of the figure would be the ceſſation of the whole; which is impoſſible.

These determinations of movement in the ſolid and extended parts of matter, are what we call the phenomena of Nature, to which we give names and attribute uſes, perfections or imperfections, according to the manner in which they affect our ſenſes, or cauſe pleaſure or pain to our bodies, and contribute to our conſervation, or to our deſtruction: but we do not always denominate them from their real cauſes, or from the manner in which they produce one another, ſuch as the elaſticity, the hardneſs, the ſoftneſs, the fluidity, the quantity, the figures and the relations of particular bodies; on the contrary, we often do not attribute many determinations of movement to any cauſe at all, as in the ſpontaneous movements of animals; for though even theſe movements ſhould be accompanied by thought, nevertheleſs, if we conſider them as movements, they have their phyſical cauſes. It is thus that a dog runs after a hare, which ariſes from that the exterior object acts with all it's attractive or impulſive force upon the nerves, which are diſpoſed with the muſcles, the joints and the other parts, in ſuch a manner as to produce different movements in the mechaniſm of the animal. Whoſoever has an idea of the action of bodies one upon another, by their immediate contact, or by the imperceptible particles which inceſſantly iſſue from them; and who to this knowledge joins *that* of the laws of mechanicks, of hydroſtaticks, and anatomy, will be convinced that all the movements by which man ſits down, ſtands upright, lies down, riſes up again, walks and runs, &c, have for their principle, determinations proper, material, and proportional to their effects.

Newton, in the preface to his Principles of Mathematicks, after having ſpoken of gravity, of elaſticity, of reſiſtance, of impulſion, of attraction, and of the manner in which he explains the mundane ſyſtem by theſe principles, ſays, "It is much to be wiſhed that "one could, by the aid of mechanical "principles, explain in like manner the "other phenomena of Nature; for "many things make me ſuſpect that "they may well depend upon certain "forces, whereby, from cauſes yet un"diſcovered, the particles of bodies are "mutually impelled againſt each other, "and cohere according to regular fi"gures, or whereby they recede and "are driven from one another: but "theſe forces being yet unknown, phi"loſophers have hitherto in vain at"tempted to explain Nature." No man in the world is better able than this great man was, to diſcover the nature of theſe particular forces, and of theſe particular figures, and of reducing them into ſyſtem. As to the general force, or the moving force of all nature, I preſume to flatter myſelf that I have contributed by this writing to make it known.

No reaſon can be given, why the Supreme Intelligence ſhould not have given activity to matter as well as extenſion; the one of theſe properties is no more impoſſible to it than the other: muſt we not therefore neceſſarily conclude that this Supreme Intelligence directs, without ceaſing, all it's movements? Can the formation of plants and of animals be accounted for, from the action any more than from the extenſion of matter? Is it in the power of man to prove, that without the power of this Supreme Intelligence, the action or the re-action of bodies and of all the particles of matter one upon another, could ever have produced the admirable mechaniſm of theſe plants and of theſe animals? The moſt profound knowledge in mechanicks would be of no effect. All the fortuitous rencontres of atoms, all the ſtrokes of chance which could poſſibly be imagined, could no more give to the parts of the univerſe, the order which we ſee in them, than the characters of the alphabet thrown together a hundred thouſand millions of times, could produce poems like the *Eneid of Virgil*, or the *Iliad of Homer*.

In regard to what has been ſaid concerning the infinity of matter, it only excludes, as do all ſenſible men, an extended and corporeal God, but not an Intelligence ſupreme and immaterial.

A MAN exempt from all prejudices, muſt be convinced of theſe truths, and conſequently may live tranquilly without other embarraſſments than the care of preſerving his health and cultivating his reaſon; occupations the moſt agreeable that he can have during the courſe of his life. He feels a ſelf-applauſe in comparing the interior tranquillity which he enjoys, with the inquietudes, the embarraſſments, and the fears which torment others, and to which, according to them, death itſelf may not put an end. He ſees himſelf by the uſe of his reaſon ſecured againſt the vain phantoms and chimeras which infeſt, without ceaſing, the moſt part of mortals. Content with *that* which it is permitted him to know, and with the diſcoveries which he every day makes, he does not think himſelf intereſted to ſound impenetrable depths. He is not, like the ſtupid animal, a ſlave to imperious authority: content with his lot, he expects, without trembling, *death*, as an inevitable term which the Author of Nature has fixed to all beings. This death cannot affright the man who knows that his fate is in the hands of an Intelligence infinitely perfect, whoſe goodneſs, wiſdom, juſtice, cannot be mixed with any imperfection, nor ever belie itſelf.

## *Character of a true Philoſopher.*

THE true philoſopher is a human machine as well as another man; but he is a machine which, by it's mechanical conſtitution, reflects upon it's own movements. The actions of other men are determined without their either perceiving or knowing the cauſes which put them in motion, without their even thinking that there are any ſuch.

The philoſopher, on the contrary, unfolds theſe cauſes as much as in him lies; ſometimes he anticipates their effects, ſometimes he gives himſelf up to them with knowledge; thus he ſhuns ſuch objects as may inſpire him with ſentiments which are neither ſuitable to happineſs, nor to a reaſonable being, and ſeeks after thoſe only, which are proper to excite in him affections, adapted to the ſtate in which he is placed. He may be compared to a clock, which (if I may ſo expreſs myſelf) ſometimes winds itſelf up.

Reason is, in reſpect to the philoſopher, what grace is, in reſpect to the Chriſtian. In the ſyſtem of St. *Auguſtin*, grace determines the Chriſtian to act voluntarily; reaſon determines the philoſopher, without taking from him his reliſh for the voluntary.

Other men are hurried away by their paſſions, without their actions being preceded by reflexion; they are men who walk in the dark; whereas the philoſopher, even in his paſſions, acts only in conſequence of reflexion; he walks in the night, but he is preceded by a flambeau.

The philoſopher forms his principles upon an infinity of particular obſervations; the people adopt the principle without thinking of the obſervations which have produced it. They believe that the maxim exiſts, as one may ſay, by itſelf; but the philoſopher takes up the maxim from it's ſource; he examines it's origin, he knows it's proper value, and only applies it according to it's true meaning.

From this knowledge, that principles only ſpring from particular obſervations, the philoſopher conceives an eſtime for the ſcience of facts; he loves to inſtruct himſelf in details, and in every thing that depends not upon conjecture; thus to confine himſelf to meditation alone, and to believe that man draws truth only from his own interior lights, he holds to be a maxim very oppoſite to the progreſs of knowledge.

Certain metaphyſicians ſay, avoid the impreſſions of the ſenſes, leave to hiſtorians the knowledge of facts, and to grammarians that of languages.

Our philoſophers, on the contrary, are perſuaded that all our knowledge comes through the medium of the ſenſes; that we have only formed rules to ourſelves upon the uniformity of the ſenſible impreſſions; that our knowledge is at it's utmoſt extent when our ſenſes are neither fine enough nor ſtrong enough to furniſh us further lights. Convinced that the ſource of our knowledge ſprings intirely from without ourſelves, they exhort us to make an ample proviſion of ideas in devoting ourſelves to the exterior impreſſions of objects; but in devoting ourſelves to them as ſtudents who conſult and liſten, and not as maſters who decide and impoſe ſilence. They wiſh us to ſtudy the preciſe impreſſion which each object makes upon us, and to avoid confounding it with *that* which another object has cauſed.

FROM thence ariſes the certainty and the bounds of human knowledge; a certainty, when we perceive that we have received from without, the proper and preciſe impreſſion which each judgment ſuppoſes; for every judgment diſcerns and feels the exterior impreſſion which is particular to it; and the boundaries are, when we can neither receive impreſſions either from the nature of the object, or on account of the weakneſs of our organs. Augment, if it is poſſible, the power of the organs, and you will augment your knowledge. It is but ſince the diſcovery of the teleſcope and the microſcope, that we have made ſo great a progreſs in aſtronomy and phyſicks.

It is, moreover, in order to augment the ſtock of our knowledge and of our ideas, that our philoſophers ſtudy the men of former ages, and the men of the preſent age.

SPREAD yourſelves abroad like the bees, ſay they to us, in the world paſt and in the world preſent, and return afterwards into your hive to compoſe your honey.

THE philoſopher applies himſelf to the ſtudy of the univerſe and of himſelf; but as the eye cannot ſee itſelf, the philoſopher knows that he cannot know himſelf perfectly; inaſmuch as he cannot receive an exterior impreſſion in the interior of himſelf, and as we know nothing but by ſuch kind of impreſſions.

THIS thought has nothing in it to afflict him, ſeeing that he takes himſelf ſuch as he is, and not ſuch as it ſeems to his imagination that he might have been: moreover, this ignorance is not a reaſon for him to decide that he is compoſed of two oppoſite ſubſtances. Therefore, as he does not know himſelf perfectly, he ſays that he does not know *how* he thinks, but that he perceives he does think; he acknowledges that his ſubſtance is capable of thinking, in like manner as it is capable of hearing and of ſeeing.

THOUGHT is to man a ſenſe the ſame as hearing or ſeeing, depending equally upon an organical conſtitution; the air only is capable of rendering ſounds; fire only can excite heat; the eyes only can ſee; the ears only can hear, and the ſubſtance of the brain only is ſuſceptible of thought.

BUT if men have ſo much difficulty in uniting the idea of thought with the idea of extenſion, it is becauſe they have never ſeen extenſion think; they are in that reſpect what a blind-man-born is in reſpect to colours, or a man born deaf in reſpect to ſounds; they cannot unite theſe ideas with the extenſion which they feel, becauſe they have never ſeen this union. Truth is not to the philoſopher a miſtreſs who corrupts his imagination, and which he expects to find every where. He contents himſelf to unfold it where he can perceive it; he does not confound it with probability; he takes *that* to be true which is true, *that* to be falſe which is falſe, *that* to be doubtful which is doubtful, and *that* for probable which is but probable; he does more, and it is here a great perfection in a philoſopher; to wit, when he has no proper motive to judge, he finds it expedient to remain undetermined.

EACH judgment, as we have already remarked, ſuppoſes an exterior motive which ought to excite it. The philoſopher feels what ought to be the proper motive of the judgment which he is about to form; if the motive fails, he does not judge, he waits for it, and conſoles himſelf, even though he ſhould find that he waits for it in vain.

THE world is full of ſenſible men, of very ſenſible men, who perpetually judge, or rather who perpetually conjecture: for to judge without feeling that one has a proper motive of judgment, is but to conjecture; they know not the extent of the human mind; they believe it is capable of knowing every thing; therefore they feel aſhamed not to pronounce judgment, and imagine to themſelves that knowledge conſiſts in judging, in determining. The philoſopher, on the contrary, is more content with himſelf, when he has ſuſpended his faculty of ſelf-determination, than if he had determined before he had perceived the proper motive of deciſion. Thus he judges and ſpeaks leſs, but he judges more ſoundly, and ſpeaks better; he is not, however, exempt from the lively traits which naturally preſent themſelves to the mind through the rapid aſſemblage of ideas which one is often aſtoniſhed at having united. It is in this rapid combination that conſiſts *that* which is commonly called wit; but, at the ſame time, this is what he is leaſt ſolicitous about; he prefers to this brilliancy, the trouble of diſtinguiſhing well his ideas, and of knowing their juſt extent and preciſe connexion; of taking care not to get into a wrong train in carrying too far certain particular relations which the ideas have between one another. It is in this diſcernment that conſiſts *that* which we call judgment and accuracy of underſtanding.

To this accuracy muſt alſo be joined flexibility and clearneſs. The philoſopher is not ſo far attached to one ſyſtem, as not to feel all the force of the objections which may be oppoſed to it. Moſt men are ſo ſtrongly attached to their own opinions, that they do not even take the trouble of examining thoſe of others.

The philoſopher comprehends the ſentiment which he rejects with the ſame extent and the ſame clearneſs, as he underſtands *that* which he adopts.

The philoſophical knowledge is then a knowledge of obſervation and of exactneſs, which refers every thing to it's true principles; but it is not knowledge alone which the philoſopher cultivates, he carries his attention and his cares much further.

Man is not a monſter born to live in the abyſſes of the ſea, or in the wilds of a foreſt. The ſimple neceſſaries of life render a commerce with others neceſſary to him; and in whatſoever ſtate he finds himſelf, his wants and his well-being engage him to live in ſociety.

Therefore, reaſon requires of him to know, to ſtudy the ſocial qualities, and to labour to acquire them. It is aſtoniſhing that men attach themſelves ſo little to all that is of the practical kind, and that they heat themſelves to ſuch a degree with vain ſpeculations. Behold but the troubles which ſo many different hereſies have cauſed. They have always turned upon theoretic points.

Sometimes the queſtion has been as to the number of the perſons of the *Trinity*; ſometimes as to their *emanations*; ſometimes as to the number of the *ſacraments* and their virtues; ſometimes concerning the nature of *grace*.—What wars, what diſorders for mere chimeras!

THE philoſophick world is ſubject to the ſame viſions. How many diſputes in the ſchools! How many books upon vain queſtions! One word would decide them, or ſhew that they are inſoluble.

ONE ſect, famous at this day, reproaches perſons of erudition with neglecting the ſtudy of their own underſtanding, in order to charge their memory with facts and reſearches into antiquity; and we reproach both the one and the other with neglecting to render themſelves amiable, and to perform the duties of ſociety.

Our philoſopher does not deem himſelf in exile in this world; he does not believe himſelf to be in an enemy's country; he wiſhes to enjoy, as a ſage œconomiſt, the good things which Nature offers him; he is deſirous to find pleaſure with others; and, in order to find it, he knows he muſt contribute to give it. Thus he ſeeks to make himſelf agreeable to thoſe with whom chance or choice make it his lot to live, and he finds, at the ſame time, *that* which is agreeable to himſelf; he is a man who wiſhes to pleaſe and to make himſelf uſeful.

Most part of the Great, whoſe diſſipations leave them not ſufficient time to meditate, are harſh and unfeeling towards thoſe whom they do not look upon as their equals.

Ordinary philoſophers who meditate too much, or rather who meditate ill, are ſo towards all the world; they ſhun men, and men avoid them.

But our philoſopher, who knows how to divide himſelf between retreat and the commerce of men, is full of humanity. He is the carter of *Terence*, who feels that he is a man, and whom humanity alone intereſts in the good or bad fortune of his neighbour.

It would be uſeleſs to remark here how much the philoſopher is jealous of all *that* which is called honour and probity, *that* is his true object.

Civil ſociety is, as we may ſay, the ſole Divinity which he acknowledges whilſt he remains upon the earth; he does incenſe to it; he honours it by his probity, by an exact attention to his duties, and by a ſincere deſire not to be an uſeleſs and embarraſſing member of it.

Sentiments of probity enter as much into the mechanical conſtitution of the philoſopher, as do the lights of the underſtanding; the more he becomes enlightened, the more probity you find in him; on the contrary, where fanaticiſm and ſuperſtition reign, there paſſions and tranſports reign alſo: it is *Magdalen* who loves the world, and *Magdalen* who loves God; it is always *Magdalen* who loves with violence.

Now, *that* which makes the accompliſhed man, is not the acting through love

love or through hatred, through hope or through fear; it is the acting from a ſpirit of order or of reaſon. Such is the conſtitution of the philoſopher; now, there is ſcarce any thing to be depended upon but the virtues of conſtitution. Truſt your wine to him who naturally does not like it, rather than to him who every day forms new reſolutions never to get drunk again.

The devotee is a virtuous man only by paſſion; now, the paſſions have in their nature nothing fixed; moreover, the devotee, I beg leave to ſay, is in the habit of not being an honeſt man, as towards God, becauſe he is in the habit of not following exactly his own rule.

Religion is ſo ill adapted to human nature, that the moſt juſt commit infidelities

delities towards God ſeven times a day, that is to ſay, many times. The frequent confeſſions of the moſt pious, ſhew us in their hearts, according to their manner of thinking, a continual viciſſitude of good and evil; under this point of view, to think one's ſelf guilty, is to be ſo.

This eternal combat, in which man is ſo often worſted, forms in him a habit of ſacrificing virtue to vice; he familiarizes himſelf to follow his inclination, and to commit faults in the hopes of ſetting himſelf off to advantage by repentance. When a man is ſo often unfaithful towards God, he diſpoſes himſelf inſenſibly to become ſo towards man.

Moreover, the preſent has always more force upon the mind of man, than the future, *which* ſelf-love always ſhews us in a remote point of view. The ſuperſtitious man always flatters himſelf with making amends for his faults, with avoiding puniſhment, and with meriting recompenſes; thus experience ſufficiently ſhews that the reſtraint of religion is very weak. Notwithſtanding ſo many ſermons, ſo many lectures, the people are always the ſame; Nature is ſtronger than chimeras. She ſeems as if ſhe was jealous of her rights; ſhe frequently retires herſelf from the chains in which blind Superſtition wiſhes idly to bind her. The philoſopher alone who knows how to enjoy her, regulates her by reaſon.

EXAMINE all thoſe againſt whom human Juſtice is obliged to make uſe of her ſword; you will find either ardent conſtitutions, or minds little enlightened, ed, and always ſuperſtitious or ignorant perſons. The tranquil paſſions of the philoſopher may carry him to voluptuouſneſs, but never to crime; his cultivated reaſon guides him, and never conducts him to diſorder.

Superstition makes men feel but weakly how much it imports them, in reſpect to their preſent intereſt, to follow the laws of ſociety; ſhe even condemns thoſe who only follow them from this motive, which ſhe calls, with contempt, a human motive. The chimerical is with her much more perfect than the natural. Her exhortations therefore only operate as a chimera neceſſarily ought to operate. They trouble, they terrify; but when the vivacity of the images which they have produced is ſlackened, when the tranſient glow of the imagination is extinguiſhed, man remains without knowledge abandoned to the weakneſſes of his nature.

Our Sage, in fearing nothing after death, ſeems to loſe one additional motive to be an honeſt man during his life: but during *it*, he gains conſiſtence, as one may ſay, and vivacity in the motive which makes him act; a motive ſo much the more ſtrong, as it is purely human and natural; the motive is the ſelf-ſatisfaction which he finds in being content with himſelf, and in following the rules of probity: a motive which the ſuperſtitious man has but imperfectly; for all that there is of good in him is but imaginary.— To this motive may be joined alſo another very powerful one; to wit, the ſelf-intereſt of the Sage, an intereſt preſent and real.

Separate for a moment the philoſopher from the honeſt man, and what remains to him? Civil ſociety, his only ſupport here below, abandons him. Behold him deprived of the moſt ſweet ſatisfactions of life; behold him baniſhed without return the commerce of virtuous men. It therefore behoves him much more than it does the reſt of men, ſo to diſpoſe all the ſprings of his actions, as that they may only produce effects conformable to the idea of the virtuous man. Believe not that though no one has his eyes upon him, he abandons himſelf to an action contrary to probity. No, ſuch an action is not conformable to the mechanical diſpoſition of the Sage. He is kneaden up, as one may ſay, with the leaven of order and rule; he is filled with ideas of the good of civil ſociety; he knows the principles of it much better than other men. Crime would find in him too much oppoſition; it would in him have too many natural ideas, and too many acquired ones to deſtroy. His faculty of acting may be compared to the ſtring of a muſical inſtrument tuned to a certain tone, *it* can produce no other. He is afraid to untune himſelf, and to diſaccord with himſelf.

Moreover, in all the actions which men do, they ſeek only their own proper actual ſatisfaction; it is the preſent good, or rather the preſent attraction, according to the mechanical diſpoſition in which they find themſelves, which makes them act.—Now, why would you have it, that becauſe the philoſopher expects neither puniſhments nor rewards after this life, and leaving Providence to follow it's courſe, he muſt find a preſent attraction which induces him to kill you, or to deceive you? Is he not, on the contrary, more diſpoſed by his reflexions to find more attractions and pleaſure to live with you, to attract to himſelf your confidence and eſteem, and to acquit himſelf of the duties of friendſhip and of gratitude? Are not theſe ſentiments in the nature of man, independent of all modes of belief concerning futurity? The idea of a diſhoneſt man is as oppoſite to the idea of philoſophy, as is the idea of a ſtupid man; and experience ſhews us every day, that the more a man has of reaſon and knowledge, the more he is good, wiſe, and proper for the commerce of life.

I WOULD freely enter into a greater detail, but that we muſt ſufficiently perceive already that the republic muſt derive the greateſt utility from thoſe who, bred to high ſtations, are full of ideas of order and public good, and of all *that* which is called humanity. It were to be wiſhed that one could exclude from ſuch ſtations all thoſe who, by their bad education, are filled with other ſentiments.

THE true philoſopher is then an honeſt man, who in all his actions makes reaſon his guide, and who joins to a ſpirit of reflexion and rectitude, morals and the ſocial qualities.

THE true philoſopher perceives that he is ſomething exiſting. Now, he cannot know this ſomething which he perceives, but by *the Intelligence*, ſince without *it*, one can conceive nothing. This Intelligence is then the ſole neceſſary; and all which is not it, is contingent to it. *It* is then the firſt cauſe and the only ſource of all that exiſts. This Intelligence cannot have had a beginning; *it* is then eternal and Infinite; as Intelligence, *it* has no need but of itſelf to exiſt, and it is certainly it's own cauſe. Since *it* is it's own cauſe, and that nothing can exiſt without it, *it* is then alſo the cauſe of all that exiſts; for it is of the eſſence of an effect, to have a cauſe: conſequently, the Intelligence is the neceſſary cauſe, as well of itſelf, as of all *that* which exiſts, or which can exiſt.

The philoſopher cannot doubt but that the intelligent Subſtance is determined, ſince that it is the cauſe general of itſelf and of all *that* which exiſts. He cannot doubt but that this intelligent cauſe is free, ſince that it is it's own proper cauſe of exiſting and acting.

The philoſopher calls contingent, *that* which may be and not be; in which ſenſe, it is evident that neither the intelligent ſubſtance nor it's actions can be underſtood, inaſmuch as it's nature and it's conſequences are equally neceſſary and determined.

The philoſopher calls *neceſſary* all *that* which is determined; and in this ſenſe, the intelligent Subſtance is neceſſary, being determined by itſelf; and particular beings are alſo neceſſary, inaſmuch as determined by their cauſes. But there is another ſort of neceſſity, which is that of nature; ſuch is that of the ſubſtance, the exiſtence whereof is neceſſary by it's definition, (viz. *matter*) which conſequently is not applicable to individual beings, all of which may be conceived as not exiſting.

There is alſo in like manner another ſort of determination, which conſiſts in the bounds preſcribed to particular beings,

ings, whether in reſpect to their extenſion, the conformation of their organs, their perceptions, or their knowledges; but this kind of limited determination, is oppoſed to the general idea, and is applicable to individuals only.

This granted, the philoſopher concludes, that the action of the intelligent Subſtance is eternal, free, infinite, and neceſſary as it's nature, becauſe that otherwiſe it's action would not depend upon itſelf; it would have another cauſe foreign to itſelf, inconſiſtent with it's definition, which the philoſopher conceives as it's own cauſe of exiſting and acting.

And from thence even it follows, that it is omnipotent: that is to ſay, that it can do every thing that is poſſible, not to limited beings, or to a finite underſtanding, but in general to every thing that may be conſequent to it's infinite attributes. Now, from the infinity of attributes, follows the infinity of conſequences. Therefore, the intelligent Subſtance, or the abſolute Being, is infinite in it's action, and conſequently omnipotent.

ACCORDING to this enumeration of the attributes of the intelligent Subſtance, but more ſenſibly according to *that* which the philoſopher conceives under the name of abſolute cauſe and of omnipotence, it is not difficult to form an idea of the Supreme Being, which the philoſopher conceives as the Being abſolutely infinite, the Subſtance endowed with an infinity of attributes, or rather perceivable by an infinity of properties, each of which expreſſes infinitely it's eternal and infinite eſſence.

FINIS.

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